



**AEROSOL TRANSMISSIBLE DISEASES INCLUDES TUBERCULOSIS
EXPOSURE CONTROL PLAN**

California Regions^{*1}

Los Angeles Medical Center

DATE ADOPTED	5/87
REVIEW DATE(S)	01/2014

Approvals:	Signature/Date
Areas Medical Director/PIC	Michael Tome
Hospital Executive Director	Mark Costa
Medical Group Administrator	Will Grice

¹ Cal OSHA regulation, content applicable to all Regions

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 2 of 60

ACKNOWLEDGEMENTS

PREFACE

This **ATD Exposure Control Plan** is developed pursuant to the requirements of the Cal-OSHA May 2009 Aerosol Transmissible Disease Standard Title 8 Chapter 4, Section 5199.

The purpose of the ATD Exposure Control Plan is to provide guidelines, standards of work practice, overall policy goals and references to elements of existing procedures designed to assist in protecting our health care workers against occupational transmission of aerosol transmissible disease including tuberculosis. Through the provisions of this Plan, strategies are to be developed and implemented to minimize the risk of health care worker exposure to these pathogens.

This Plan applies to all personnel who reasonably anticipate coming into contact with patients suspected or known to have an aerosol transmissible disease while in the work environment or performing work related tasks.

Kaiser Permanente strives to maintain a work environment that is conducive to the health, development, success and retention of our workforce. To this end, the development and implementation of the ATD Exposure Control Plan promotes such an environment by standardizing and organizing existing measures of protection and risk reduction, and reflects our common objective to ensure a higher level of knowledge, comfort and occupational safety for our health care workers and staff.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 3 of 60

TABLE OF CONTENTS

CONTENT	PAGE NUMBER
1. PURPOSE	6
2. Definitions	7-18
3. PROGRAM MANAGEMENT	18-23
A. Administration or Designees	19
B. Infection Prevention and Control	19
C. Environmental Health and Safety	20
D. Employee Health Services	20
E. Department Managers/Physician Chiefs	21
F. Employees and Physicians	21
G. Engineering	21
H. Training	21
I. Record Keeping	23
4. EXPOSURE PREVENTION-HIERARCHY OF CONTROLS	24-33
A. Source Control Procedures	24
B. Prompt Identification of Suspected ATD Cases	24
C. Engineering/Administrative Controls	26
a. Airborne Infection Isolation (All Rooms)	26
b. Engineering Control System Management	28
c. Patient Isolation	29
d. Patient Discharge	29
e. Respiratory Protection	30
D. Work Practice Control	33
E. Special Considerations in Peri Op and L&D Areas	33
5. EXPOSURE CONTROL AND FOLLOW-UP	35
A. Department Manager	35

TABLE OF CONTENTS cont'd

CONTENT	PAGE NUMBER
---------	-------------

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 4 of 60

B. Infection Control Service	35
C. Employee Health Service	35
6. ATD and TB SURVEILLANCE	36
A. New Employees	36
B. Ongoing Surveillance/TB Screening	36
7. N95 RESPIRATOR RESPIRATOR FIT TESTING	37
8. Provision of PPE & Product Supply Maintenance	37
9. Obtaining Employee input	38
10. Surge Procedures	38
11. Other Documentation	38
Appendix A: Cal/OSHA Guidelines Influenza	39
Appendix B: Exposure Determination	40-47
1. High Procedures	41
2. Tasks and Procedures Involving Occupational Exposure Matrix	42-47
Appendix C: Resources	48
1. N-95 Respirators	48
2. PAPRs	48
Appendix D: Forms	49-57
1. Alternate Respirator Medical Evaluation Questionnaire	49
2. Information for Respirator Fit-Test Screening	51
3. Respirator Medical Evaluation Questionnaire	52
4. Fit Testing Annual Questions	54
5. Supplemental Information for the PLHCP	56
Appendix E: Aerosol Transmissible Diseases/Pathogens list	58-59
Appendix F: References	60
1. Annual Fit Testing Evaluation: NCal: "Guidelines for TB Exposure in Healthcare Settings" or SCal: "Annual Fit Questions"	60
2. Annual TST Screening Forms: NCal: "Tuberculosis Questionnaire" or SCal: "Interval Health Evaluation Questionnaire"	60
3. Cal OSHA Aerosol Transmissible Disease Standard, August 2009 (www.dir.ca.gov/oshsb/ATD_txtbdconsider.pdf)	60
4. Cal OSHA TB Standard Enforcement Document April 1997	60

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 5 of 60

5. CDC Guidelines – Preventing the Transmission of Mycobacterium tuberculosis in Healthcare Settings December 2005: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm	60
6. CDC Guidelines - Testing and Treatment of Latent TB, June 2000: http://www.cdc.gov/mmwr/PDF/rr/rr4906.pdf	60
7. Example of TB Patient’s Discharge Treatment Plan	60
8. Federal OSHA TB Standard 1997	60
9. Kaiser Educational Modules online: http://xnet.kp.org/hr/ca/north/docs/hrpeople/learndevelop/safety.htm	60
10. Kaiser Employee Health Standard Protocols on TB treatment and transmission prevention – online in the KP Clinical Library under “Employee Health”: NCal: http://clinical-library.ca.kp.org/ ; and online on the SCal Occupational Medicine and Employee Health website: http://EOHSweb/ehs/home.asp	60
11. KP EH&S TB Guidance Document: http://kpnet.kp.org/ehs/programs/tb.htm	60
12. Respirator Medical Evaluation: NCal: “Respirator Medical Evaluation Questionnaire” or SCal: “Physical Status Questionnaire”	60
13. TB Education Form for Staff and Physicians, Kaiser form# 09171-14	60
14. KPLearn Training Module: Aerosol Transmissible Diseases	60
Appendix G: Bibliography	60

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 6 of 60

1. PURPOSE:

Kaiser Permanente has implemented this Aerosol Transmissible Diseases (ATD) Exposure Control Plan (ECP) to meet the intent of California Occupational Safety and Health Administration (Cal OSHA) ATD Standard and Centers for Disease Control and Prevention (CDC) Guidelines for Preventing the Transmission of various ATD including M. Tuberculosis in Health Care Settings. The purpose of this plan is to define/describe the essential elements of the mandated ATD Exposure Control Plan.

This template must be modified by individual facilities to identify the plan and practices that make this template facility specific. Please note that any yellow highlighted entry in this document requires each facility to insert facility specific information.

This plan includes:

- A. Facilities that evaluate, treat, perform aerosolizing procedure on patients with ATDs. Required plan elements for these types of facilities include:
- A written plan that is reviewed annually to correct any deficiencies identified, available to employees and is Facility specific;
 - Individual responsibilities for administrating the plan;
 - Job classifications with occupational exposure
 - High hazard procedure performed;
 - Tasks requiring respirators and PPE;
 - Methods of implementing a)work practices and engineering controls, b)cleaning and decontaminating procedures, and c)PPE and respirators;
 - Source control measures and how implemented;
 - Procedures to identify, temporarily isolate, and refer or transfer AirID cases to All rooms and procedures for documenting medical decision not to transfer patients requiring All rooms;
 - Medical services provided including vaccinations and follow up procedures for documenting the unavailability of a recommended vaccine;
 - Procedures for communicating to employees about infectious disease status of a person exposed to and process for communication this information to other employers regarding exposure incidents;
 - Procedure to ensure adequate supply of PPE and equipment for normal operations and foreseeable emergencies;
 - Procedure for evaluating each exposure incident and prevent further exposures;
 - Procedure for initial and annual training;
 - Procedure for record keeping;
 - Procedure for obtaining active involvement of employees to review the ATD plan; and
 - Surge procedures.
- B. The Laboratory is required to have a Laboratory Biosafety Plan. Required plan elements for these types of facilities include;
- Perform a risk assessment for each agent and procedure involving ATP-L;
 - Establish controls based on risk;
 - Identify Biosafety Officer;
 - List ATP-Ls;
 - Procedure to treat incoming attenuated agents as wild type pathogen until tested;

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 7 of 60

- Engineering controls, safe handling procedures, prohibit hazardous procedures;
- Decontamination and disinfection procedures;
- PPE and respirators information;
- Emergency procedures / uncontrolled releases;
- Training and hazard communications;
- Active involvement of employees reviewing the plan;
- Biosafety Officer requirements to review plans for facility design and construction that affects controls; and
- At least annual inspections and audits.

- C. Facilities that screen, identify, and transfer patients suspected of ATD disease are classified as Referring Employers. Required plan elements for these facilities include:
- Source controls including early identification, cough hygiene, separation;
 - Screening procedures;
 - System for timely referral transfer;
 - Training employees;
 - System for exposure incidents including precautionary removal and TB surveillance;
 - Provide CDC recommended vaccinations to HCWs; Provide seasonal flu vaccine to all employees with occupational exposure; and
 - System for Record keeping.

2. DEFINITIONS:

Acid-fast bacilli (AFB): Bacteria that retain certain dyes after being washed in an acid solution. Most acid-fast organisms are mycobacterium. When AFB are seen on a stained smear of sputum or other clinical specimen, a diagnosis of TB should be suspected; however, the diagnosis of TB is not confirmed until a culture is grown and identified as *M. tuberculosis*.

Accredited laboratory: A laboratory that is licensed by the CDPH pursuant to Title 17 of the California Code of Regulations (CCR), or which has received a certification of competence based on participation in a quality assurance program administered by a governmental or private organization that tests and certifies laboratories.

Aerosol transmissible disease (ATD) or aerosol transmissible pathogen (ATP): A disease or pathogen for which droplet or airborne precautions are required, as listed in Appendix B.

Aerosol transmissible pathogen -- laboratory (ATP-L): A pathogen that meets one of the following criteria: (1) the pathogen appears on the list in Appendix D, (2) the Biosafety in Microbiological and Biomedical Laboratories (BMBL) recommends biosafety level 3 or above for the pathogen, (3) the biological safety officer recommends biosafety level 3 or above for the pathogen, or (4) the pathogen is a novel or unknown pathogen.

Airborne infection isolation (AII): Infection control procedures as described in Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings. These procedures are designed to reduce the risk of transmission of airborne infectious pathogens, and apply to patients known or suspected to be infected with epidemiologically important pathogens that can be transmitted by the airborne route.

Airborne infection isolation room or area (AIIR): A room, area, booth, tent, or other enclosure that is maintained at negative pressure to adjacent areas in order to control the spread of aerosolized *M. tuberculosis* and other airborne infectious pathogens and that meets the requirements stated in subsection (e)(5)(D) of this standard.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 8 of 60

Airborne infectious disease (AirID): Either: (1) an aerosol transmissible disease transmitted through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the disease agent for which All is recommended by the CDC or CDPH, as listed in Appendix A, or (2) the disease process caused by a novel or unknown pathogen for which there is no evidence to rule out with reasonable certainty the possibility that the pathogen is transmissible through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the novel or unknown pathogen.

Airborne infectious pathogen (AirIP): Either: (1) an aerosol transmissible pathogen transmitted through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the infectious agent, and for which the CDC or CDPH recommends All, as listed in Appendix A, or (2) a novel or unknown pathogen for which there is no evidence to rule out with reasonable certainty the possibility that it is transmissible through dissemination of airborne droplet nuclei, small particle aerosols, or dust particles containing the novel or unknown pathogen.

Biological safety officer(s): A person who is qualified by training and/or experience to evaluate hazards associated with laboratory procedures involving ATPs-L, who is knowledgeable about the facility biosafety plan, and who is authorized by the employer to establish and implement effective control measures for laboratory biological hazards.

Biosafety level 3: Compliance with the criteria for laboratory practices, safety equipment, and facility design and construction recommended by the CDC in Biosafety in Microbiological and Biomedical Laboratories for laboratories in which work is done with indigenous or exotic agents with a potential for aerosol transmission and which may cause serious or potentially lethal infection.

Biosafety in Microbiological and Biomedical Laboratories (BMBL): Biosafety in Microbiological and Biomedical Laboratories, Fifth Edition, CDC and National Institutes for Health, 2007, which is hereby incorporated by reference for the purpose of establishing biosafety requirements in laboratories.

Booster phenomenon: A phenomenon in which some persons (especially older adults) who are skin tested many years after infection with *M. tuberculosis* have a negative reaction to an initial skin test, followed by a positive reaction to a subsequent skin test. The second (i.e., positive) reaction is caused by a boosted immune response. Two-step testing is used to distinguish new infections from boosted reactions.

CDC: United States Centers for Disease Control and Prevention.

CDPH: California Department of Public Health and its predecessor, the California Department of Health Services (CDHS).

Case: Either of the following:

A person who has been diagnosed by a health care provider who is lawfully authorized to diagnose, using clinical judgment or laboratory evidence, to have a particular disease or condition.

A person who is considered a case of a disease or condition that satisfies the most recent communicable disease surveillance case definitions established by the CDC and published in the Morbidity and Mortality Weekly Report (MMWR) or its supplements.

Chief: The Chief of the Division of Occupational Safety and Health of the Department of Industrial Relations, or his or her designated representative.

CTCA: The California Tuberculosis Controllers Association.

Droplet precaution. Infection control procedures as described in Guideline for Isolation Precautions designed to reduce the risk of transmission of infectious agents through contact of the conjunctivae or the mucous membranes of the nose

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 9 of 60

or mouth of a susceptible person with large-particle droplets (larger than 5 µm in size) containing microorganisms generated from a person who has a clinical disease or who is a carrier of the microorganism.

Droplet nuclei: Microscopic particles (i.e., 1-5µm in diameter) produced when a person coughs, sneezes, shouts or sings. The droplets produced by an infectious TB patient can carry tubercle bacilli and can remain suspended in the air for prolonged periods of time and can be carried on normal air currents in the room.

Droplet precautions: Infection control procedures as described in Guideline for Isolation Precautions designed to reduce the risk of transmission of infectious agents through contact of the conjunctivae or the mucous membranes of the nose or mouth of a susceptible person with large-particle droplets (larger than 5 µm in size) containing microorganisms generated from a person who has a clinical disease or who is a carrier of the microorganism.

Drug treatment program: A program that is (A) licensed pursuant to Chapter 7.5 (commencing with Section 11834.01), Part 2, Division 10.5 of the Health and Safety Code; or Chapter 1 (commencing with Section 11876), Part 3, Article 3, Division 10.5 of the Health and Safety Code; or (B) certified as a substance abuse clinic or satellite clinic pursuant to Section 51200, Title 22, CCR, and which has submitted claims for Medi-Cal reimbursement pursuant to Section 51490.1, Title 22, CCR, within the last two calendar years or (C) certified pursuant to Section 11831.5 of the Health and Safety Code.

Emergency medical services: Medical care provided pursuant to Title 22, Division 9, by employees who are certified EMT-1, certified EMT-II, or licensed paramedic personnel to the sick and injured at the scene of an emergency, during transport, or during inter facility transfer.

Epidemiology and Prevention of Vaccine-Preventable Diseases: Epidemiology and Prevention of Vaccine-Preventable Diseases. Centers for Disease Control and Prevention, Atkinson W, Hamborsky J, McIntyre L, Wolfe S, eds. 10th ed. 2nd printing, including chapters from the 9th edition on Anthrax and Smallpox, Washington DC: Public Health Foundation, 2008, which is hereby incorporated by reference.

Exposure: The condition of being subjected to something (i.e., infectious agents) that could have a harmful effect. A person exposed to *M. tuberculosis* does not necessarily become infected (see transmission).

Exposure incident: An event in which all of the following have occurred: (1) An employee has been exposed to an individual who is a case or suspected case of a reportable ATD, or to a work area or to equipment that is reasonably expected to contain ATPs associated with a reportable ATD; and (2) The exposure occurred without the benefit of applicable exposure controls required by this section, and (3) It reasonably appears from the circumstances of the exposure that transmission of disease is sufficiently likely to require medical evaluation.

Exposure incident (laboratory): A significant exposure to an aerosol containing an ATP-L, without the benefit of applicable exposure control measures required by this section.

Field operation: An operation conducted by employees that is outside of the employer's fixed establishment, such as paramedic and emergency medical services or transport, law enforcement, home health care, and public health.

Fit Check: An action conducted by the respirator user to determine if the respirator is properly seated to the face (also known as a seal check).

Fit Test: Assessment of the adequacy of respirator fit to the individual. This can be performed as either a qualitative pass/fail fit test by relying on the individual's response to the test agent (e.g. saccharin or Bitrex) or quantitatively by numerically measuring the amount of leakage into the respirator.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 10 of 60

Guideline for Isolation Precautions: The Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, June 2007, CDC, which is hereby incorporated by reference for the sole purpose of establishing requirements for droplet and contact precautions.

Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings: The Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, December 2005, CDC, which is hereby incorporated by reference for the sole purpose of establishing requirements for airborne infection isolation.

Health care provider: A physician and surgeon, a veterinarian, a podiatrist, a nurse practitioner, a physician assistant, a registered nurse, a nurse midwife, a school nurse, an infection control practitioner, a medical examiner, a coroner, or a dentist.

Health care worker: A person who works in a health care facility, service or operation, or who has occupational exposure in a public health service described in subsection (a)(1)(D).

High-efficiency particulate air (HEPA) filter: A specialized filter that is capable of removing 99.97% of particles 0.3 μm in diameter and that may assist in controlling the transmission of *M. tuberculosis*. The use of HEPA filters in ventilation systems requires expertise in installation and maintenance.

High hazard procedures: Procedures performed on a person who is a case or suspected case of an aerosol transmissible disease or on a specimen suspected of containing an ATP-L, in which the potential for being exposed to aerosol transmissible pathogens is increased due to the reasonably anticipated generation of aerosolized pathogens. Such procedures include, but are not limited to, sputum induction, bronchoscopy, aerosolized administration of Pentamidine or other medications, and pulmonary function testing. High Hazard Procedures also include, but are not limited to, autopsy, clinical, surgical and laboratory procedures that may aerosolize pathogens.

Individually identifiable medical information: Medical information that includes or contains any element of personal identifying information sufficient to allow identification of the individual, such as the patient's name, address, electronic mail address, telephone number, or social security number, or other information that, alone or in combination with other publicly available information, reveals the individual's identity.

Infection: The condition in which organisms capable of causing disease (i.e., *M. tuberculosis*) enter the body and elicit a response from the host's immune defenses. TB infection may or may not lead to clinical disease.

Infection control PLHCP: A PLHCP who is knowledgeable about infection control practices, including routes of transmission, isolation precautions and the investigation of exposure incidents.

Infectious: Capable of transmitting infection. When persons who have clinically active pulmonary or laryngeal TB disease cough or sneeze, they can expel droplets containing *M. tuberculosis* into the air. Persons whose sputum smears are positive for AFB are presumed to be infectious.

Initial treatment: Treatment provided at the time of the first contact a health care provider has with a person who is potentially an AirID case or suspected case. Initial treatment does not include high hazard procedures.

Laboratory: A facility or operation in a facility where the manipulation of specimens or microorganisms is performed for the purpose of diagnosing disease or identifying disease agents, conducting research or experimentation on microorganisms, replicating microorganisms for distribution or related support activities for these processes.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 11 of 60

Latent TB infection (LTBI): Infection with *M. tuberculosis* in which bacteria are present in the body, but are inactive. Persons who have LTBI but who do not have TB disease are asymptomatic, do not feel sick and cannot spread TB to other persons. They typically react positively to TB tests.

Local health officer: The health officer for the local jurisdiction responsible for receiving and/or sending reports of communicable diseases, as defined in Title 17, CCR.

NOTE: Title 17, Section 2500 requires that reports be made to the local health officer for the jurisdiction where the patient resides.

M. tuberculosis: *Mycobacterium tuberculosis* complex, which includes *M. tuberculosis*, *M. bovis*, *M. africanum*, and *M. microti*. *M. tuberculosis* is the scientific name of the group of bacteria that cause tuberculosis.

Medical specialty practice: A medical practice other than primary care, general practice, or family medicine.

Multi-drug resistant tuberculosis (MDR-TB): Active TB caused by *M. tuberculosis* organisms that are resistant to more than one anti-TB drug; in practice, often refers to organisms that are resistant to both INH and rifampin with or without resistance to other drugs.

N-95 Respirator: A respiratory protective device with a filter efficiency of 95%, used for protection against aerosol or airborne particles that resists fluid penetration and fits tightly around the mouth and nose.

Negative pressure: A relative air pressure difference between two areas. The pressure in a containment room or area that is under negative pressure is lower than adjacent areas, which keeps air from flowing out of the containment facility and into adjacent rooms or areas.

NIOSH: The Director of the National Institute for Occupational Safety and Health, CDC, or his or her designated representative.

Non-medical transport: The transportation by employees other than health care providers or emergency medical personnel during which no medical services are reasonably anticipated to be provided.

Novel or unknown ATP: A pathogen capable of causing serious human disease meeting the following criteria:

There is credible evidence that the pathogen is transmissible to humans by aerosols; and (2) The disease agent is:

A newly recognized pathogen, or

A newly recognized variant of a known pathogen and there is reason to believe that the variant differs significantly from the known pathogen in virulence or transmissibility, or

A recognized pathogen that has been recently introduced into the human population, or

A not yet identified pathogen.

NOTE: Variants of the human influenza virus that typically occur from season to season are not considered novel or unknown ATPs if they do not differ significantly in virulence or transmissibility from existing seasonal variants. Pandemic influenza strains that have not been fully characterized are novel pathogens.

Occupational exposure: Exposure from work activity or working conditions that is reasonably anticipated to create an elevated risk of contracting any disease caused by ATPs or ATPs-L if protective measures are not in place. In this context, "elevated" means higher than what is considered ordinary for employees having direct contact with the general public outside of the facilities, service categories and operations listed in subsection (a)(1) of this standard. Occupational exposure is presumed to exist to some extent in each of the facilities, services and operations listed in subsection (a)(1)(A) through (a)(1)(I). Whether a particular employee has occupational exposure depends on the tasks, activities, and environment of the employee, and therefore, some employees of a covered employer may have no occupational exposure. For example, occupational exposure typically does not exist where a hospital employee works only in an office

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 12 of 60

environment separated from patient care facilities, or works only in other areas separate from those where the risk of ATD transmission, whether from patients or contaminated items, would be elevated without protective measures. It is the task of employers covered by this standard to identify those employees who have occupational exposure so that appropriate protective measures can be implemented to protect them as required. Employee activities that involve having contact with, or being within exposure range of cases or suspected cases of ATD, are always considered to cause occupational exposure. Similarly, employee activities that involve contact with, or routinely being within exposure range of, populations served by facilities identified in subsection (a)(1)(E) are considered to cause occupational exposure. Employees working in laboratory areas in which ATPs-L are handled or reasonably anticipated to be present are also considered to have occupational exposure.

Physician or other licensed health care professional (PLHCP): means an individual whose legally permitted scope or practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by this section.

Positive TST reaction: A reaction to the purified protein derivative (TST)-tuberculin skin test that suggests the person tested is infected with *M. tuberculosis*. The person interpreting the skin-test reaction determines whether it is positive on the basis of the size of the induration and the medical history and risk factors of the person being tested.

Powered air Purifying Respirator (PAPR): An air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Public health guidelines: (1) In regards to tuberculosis, applicable guidelines published by the CTCA and/or CDPH as follows, which are hereby incorporated by reference:

(A) Guidelines for Tuberculosis (TB) Screening and Treatment of Patients with Chronic Kidney Disease (CKD), Patients Receiving Hemodialysis (HD), Patients Receiving Peritoneal Dialysis (PD), Patients Undergoing Renal Transplantation and Employees of Dialysis Facilities, May 18, 2007.

(B) Guidelines for the Treatment of Active Tuberculosis Disease, April 15, 2003 including related material: Summary of Differences Between 2003 California and National Tuberculosis Treatment Guidelines, 2004, Amendment to Joint CDHS/CTCA Guidelines for the Treatment of Active Tuberculosis Disease, May 12, 2006, Appendix 3 - Algorithm for MDR-TB Cases and Hospital Discharge, May 12, 2006.

(C) Targeted Testing and Treatment of Latent Tuberculosis Infection in Adults and Children, May 12, 2006.

(D) California Tuberculosis Controllers Association Position Statement: The Utilization of QuantiFERON – TB Gold in California, May 18, 2007.

(E) Guidelines for Mycobacteriology Services in California, April 11, 1997.

(F) Guidelines for the Placement or Return of Tuberculosis Patients into High Risk Housing, Work, Correctional, or In-Patient Settings, April 11, 1997.

(G) Contact Investigation Guidelines, November 12, 1998.

(H) Source Case Investigation Guidelines, April 27, 2001.

(I) Guidelines on Prevention and Control of Tuberculosis in California Long-Term Health Care Facilities, October 2005.

(J) Guidelines for Reporting Tuberculosis Suspects and Cases in California, October 1997.

(K) CTCA recommendations for serial TB testing of Health Care Workers (CA Licensing and Certification), September 23, 2008.

(2) In regards to vaccine-preventable diseases, the publication cited in the definition of Epidemiology and Prevention of Vaccine-Preventable Diseases.

(3) In regards to any disease or condition not addressed by the above guidelines, recommendations made by the CDPH or the local health officer pursuant to authority granted under the Health and Safety Code and/or Title 17, California Code of Regulations.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 13 of 60

Purified protein derivative (PPD) tuberculin skin test: A method used to evaluate the likelihood that a person is infected with *M. tuberculosis*. A small dose of tuberculin (TST) is injected just beneath the surface of the skin and the area is examined 48 - 72 hours after the injection. A reaction is measured according to the size of the induration. The classification of a reaction as positive or negative depends on the patient's medical history and various other risk factors.

Purified protein derivative (TST)-tuberculin skin test conversion: Increase of ≥ 10 mm induration in a 2 year period, except for those with recent contact with a known infectious patient, history of old TB by chest film or those with known/suspected HIV infection where it is a 5 mm increase. A conversion within a 2 year period is usually interpreted as new *M. tuberculosis* infection, which carries an increased risk for progression to active disease. A booster reaction may be misinterpreted as a new infection.

Referral: The directing or transferring of a possible ATD case to another facility, service or operation for the purposes of transport, diagnosis, treatment, isolation, housing or care.

Referring employer: Any employer that operates a facility, service, or operation in which there is occupational exposure and which refers AirID cases and suspected cases to other facilities. Referring facilities, services and operations do not provide diagnosis, treatment, transport, housing, isolation or management to persons requiring All. General acute care hospitals are not referring employers. Law enforcement, corrections, public health, and other operations that provide only non-medical transport for referred cases are considered referring employers if they do not provide diagnosis, treatment, housing, isolation or management of referred cases.

Reportable aerosol transmissible disease (RATD): A disease or condition which a health care provider is required to report to the local health officer, in accordance with Title 17 CCR, Division 1, Chapter 4, and which meets the definition of an aerosol transmissible disease (ATD).

Respirator: A device which has met the requirements of 42 CFR Part 84, has been designed to protect the wearer from inhalation of harmful atmospheres, and has been approved by NIOSH. for the purpose for which it is used.

Respirator user: An employee who in the scope of their current job may be assigned to tasks which may require the use of a respirator, in accordance with subsection (g).

Respiratory Hygiene/Cough Etiquette in Health Care Settings: Respiratory Hygiene/Cough Etiquette in Health Care Settings, CDC, November 4, 2004, which is hereby incorporated by reference for the sole purpose of establishing requirements for source control procedures.

Screening (health care provider): The initial assessment of persons who are potentially AirID or ATD cases by a health care provider in order to determine whether they need airborne infection isolation or need to be referred for further medical evaluation or treatment to make that determination. Screening does not include high hazard procedures.

Screening (non health care provider): The identification of potential ATD cases through readily observable signs and the self-report of patients or clients. Screening does not include high hazard procedures.

Significant exposure: An exposure to a source of ATPs or ATPs-L in which the circumstances of the exposure make the transmission of a disease sufficiently likely that the employee requires further evaluation by a PLHCP.

Source control measures: The use of procedures, engineering controls, and other devices or materials to minimize the spread of airborne particles and droplets from an individual who has or exhibits signs or symptoms of having an ATD, such as persistent coughing.

Surge: A rapid expansion beyond normal services to meet the increased demand for qualified personnel, medical care, equipment, and public health services in the event of an epidemic, public health emergency, or disaster.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 14 of 60

Surgical Mask: A respiratory protective device that provides barrier protection against large droplets without a tight fit around mouth and nose.

Susceptible person: A person who is at risk of acquiring an infection due to a lack of immunity as determined by a PLHCP in accordance with applicable public health guidelines.

Suspected case: Either of the following:

A person whom a health care provider believes, after weighing signs, symptoms, and/or laboratory evidence, to probably have a particular disease or condition listed in Appendix A.

A person who is considered a probable case, or an epidemiologically-linked case, or who has supportive laboratory findings under the most recent communicable disease surveillance case definition established by CDC and published in the Morbidity and Mortality Weekly Report (MMWR) or its supplements as applied to a particular disease or condition listed in Appendix A.

TB conversion: A change from negative to positive as indicated by TB test results, based upon current CDC or CDPH guidelines for interpretation of the TB test

TB infection: A condition in which living tubercle bacilli are present in the body but the disease is not clinically active. Infected persons usually have positive tuberculin reactions, but they have no symptoms related to the infection and are not infectious.

However, infected persons remain at lifelong risk for developing disease. Preventative therapy can reduce this risk.

TB isolation room: A single patient room with special ventilation characteristics appropriate for the purposes of isolation that ensures negative pressure. Negative pressure rooms are used to a) separate patients who are likely to have infectious TB from other persons; b) provide an environment that will allow reduction of the concentration of droplet nuclei through various engineering methods; and c) prevent the escape of droplet nuclei from the TB isolation room or treatment room, thus preventing entry of *M. tuberculosis* into the corridor and other areas of the facility.

Tuberculosis Skin Test (TST) : Any test, including the tuberculin skin test and blood assays for *M. Tuberculosis* (BAMT) such as interferon gamma release assays (IGRAs) which: (1) has been approved by the Food and Drug Administration for the purposes of detecting tuberculosis infection, and (2) is recommended by the CDC for testing for TB infection in the environment in which it is used, and (3) is administered, performed, analyzed and evaluated in accordance with those approvals and guidelines.

NOTE: Where surveillance for LTBI is required by Title 22, CCR, the TB test must be approved for this use by the CDPH.

Transmission: The spread of an infectious agent from one person to another. The likelihood of transmission is directly related to the duration and intensity of exposure to *M. tuberculosis*.

Tuberculosis (TB): A disease caused by *M. tuberculosis*.

Two-step testing: A procedure used for the baseline testing of persons who will periodically receive tuberculin testing (i.e., HCWs) to reduce the likelihood of mistaking a boosted reaction for a new infection. If the initial tuberculin-test result is classified as negative, a second test is repeated 1-3 weeks later. If the reaction to the second test is positive, it probably represents a boosted reaction. If the second test is also negative, the person is classified as not infected. A positive reaction to a subsequent test would indicate a new infection in such a person.

UVGI: Ultraviolet germicidal irradiation.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 15 of 60

3. PROGRAM MANAGEMENT:

Effective management of this comprehensive ECP requires a multidisciplinary approach that is consistent, collaborative and can effectively respond to increasing demands in the event of a significant exposure or ATD outbreak. The following sections outline the roles and responsibility of the primary disciplines accountable for the ATD ECP implementation.

A. Administration or Designees:

- 1) The Area Medical Director/PIC, Hospital Executive Director, and Medical Group Administrator shall enforce, facilitate and supervise the overall program management. The Director of Infection Prevention and Control shall perform a Medical Center risk assessment annually, and present to the following facility level committee(s): Infection Control Committee and Medical Executive Committee.
- 2) Ensure that all Individuals at occupational risk for ATD exposure, based on job classifications, high hazard procedures in which employees may be exposed, and assignment or tasks requiring personal or respiratory protection participate in a training program at the time of initial assignment to tasks with potential occupational exposure and at least annually or when there are changes in the workplace or procedures that could affect worker exposure to ATDs. (See **Appendix B: HCW exposure determination - tasks and control measures grid**)
- 3) The Administrators of Infection Prevention and Utilization Management or designee (Infection Preventionist and UM Coordinator) will ensure that the patient's TB discharge treatment plan is submitted and approved by the Health Department prior to discharge and will make a statement in the patient's "progress notes" that the form was faxed to the Public Health Department. The Administrators of Infection Prevention and Utilization Management or designee (Infection Preventionist and UM Coordinator) will ensure that the patient's TB discharge treatment plan (if required) complies with all applicable Health Department requirements including isolation, treatment, follow-up, etc and if required that the plan is submitted and approved by the Health Department prior to discharge and will place the plan and approval in the patient's chart. (see policy MCW)
- 4) The Environmental Health and Safety Director or Safety Officer shall supervise the respiratory protection program components of this ECP, including fit testing.

B. Infection Prevention and Control (IPC)

- 1) Collaborate with Employee Health Services and Environmental Health and Safety Department (EH&S) in the implementation and overall program management of the Exposure Control Plan (ECP)
- 2) Assist with annual risk assessment to determine the risk for transmission of TB and ensure this is reported to the Infection Control Committee.
- 3) Review this plan annually and revise as necessary.
- 4) Monitor facility and departmental compliance.
- 5) Act as a resource to Employee Health Services (EHS).
- 6) Act as a resource to department managers for training, clarification and review of ATD related departmental policies and procedures and/or concerns.
- 7) Report any observed deficiencies in compliance with this ECP to the appropriate department manager and to the Environmental Health and Safety (EH&S) Department.
- 8) Work with EHS to confirm employee exposures and initiate follow-up when unprotected exposure to an ATD occurs.
- 9) Communicate to other employers when a suspected exposure incident occurs e.g. First Responders.
- 10) Accompany administrative liaison during Cal/OSHA inspections.
- 11) Work with MDs, the lab and the County/State public health department to identify suspect, probable and/or confirmed cases.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 16 of 60

C. Environmental Health and Safety Department (EH&S)

- 1) Collaborate with Employee Health Services and Infection Prevention and Control (IPC), in the implementation and overall program management of the Exposure Control Plan (ECP).
- 2) Assist in the annual review of this ECP.
- 3) Monitor facility and departmental compliance.
- 4) Report deficiencies to appropriate department managers and to Administration.
- 5) Act as a resource for training and to department managers for clarification and review of departmental policies and procedures and/or concerns.
- 6) Act as the administrative liaison during a Cal/OSHA inspection and coordinate follow-up activities.
- 7) Ensure that Facility Injury and Illness Prevention Program addresses ATD transmission among the hazards it addresses.

D. Employee Health Services (EHS)

- 1) Collaborate with Environmental Health and Safety Department (EH&S) and Infection Prevention and Control (IPC), in the implementation and overall program management of the Exposure Control Plan (ECP). Assist with review of this plan annually.
- 2) Conduct the monitoring, tracking, and documentation at least annually and more frequently if applicable TB surveillance program (TST skin test or questionnaire).
- 3) Conduct ATD post-exposure evaluation; meet prescribed timelines for communicating exposure information to employees See Regional Employee Health Policy and procedure # EH 2008 that addresses employee exposure investigations; and report results to the Infection Control Committee.
- 4) For all TST conversions resulting from occupational exposure, document induration in millimeters and report to appropriate local and state agencies as required.
- 5) Ensure all TST conversions resulting from occupational exposures are sent to HR Service Center who will record on the OSHA 300 Log and indicate a "respiratory condition";
- 6) Reference Employee Health Protocol for Treatment of Latent TB (**SCAL Employee Health web site:** <http://emp-occhealth-app-server001.appl.kp.org/ehsweb/>)
- 7) Provide vaccines as appropriate, for ATD prevention.
- 8) Document immunization and/or employee declination as appropriate per HR policy 5.02 and 5.06
- 9) Implement communication plan and follow-up mechanism to assure vaccine availability if temporary shortage is in effect. The plan should include written documentation of efforts to obtain the vaccine in a timely manner and process of informing employees of the status of the vaccine availability.
- 10) Recordkeeping of all employees' occupational exposures are maintained in the EHS1 database system. These records are kept according to Kaiser Permanente's confidentiality requirements.

E. Department Managers/Physician Chiefs

- 1) Ensure that annual department specific ATD prevention related inservice is provided and documented.
- 2) Assist with employee exposure follow-up process.
- 3) Monitor compliance of employees and physicians with ATD and/or TB exposure follow-up and annual TB surveillance; document non-compliance, counsel, re-educate and apply progressive discipline to non-compliant employees and physicians.
- 4) Ensure that identified employees and physicians who may work with suspected or confirmed ATD patients are fit tested.

F. Employees and Physicians

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 17 of 60

- 1) Wear respiratory protection as described in this plan (see section 4 C e. Respiratory Protection below for further details).
- 2) Complete annual TB screening (every 6-12 months for high-risk departments as needed).
- 3) Complete annual ATD, including TB, education.
- 4) Report all incidents of exposure to ATDs to supervisor, EHS Manager and Infection Prevention and Control Professionals.
- 5) Communicate with Facilities Services/Engineering regarding all AirID patient admissions/discharges as needed to ensure proper HEPA filtration and monitoring of airborne infection isolation rooms.
- 6) The attending MD of record must complete TB patient's discharge treatment plan as soon as possible, no later than 24 hours prior to patient discharge.

G. Engineering/Facilities Services

- 1) Wear a minimum of an N-95 respirator when changing ventilation system filters (see 4.B.e).
- 2) Ensure daily checks of airborne infection isolation rooms for negative pressure while room is occupied using a smoke test or other method that allows visual confirmation of negative pressure. Method must be independent of room pressure monitoring system.
- 3) Check negative pressure isolation rooms monthly using a smoke test or other method that allows visual confirmation of negative pressure independent of room pressure monitoring system.
- 4) Ensure annual testing and certification of the negative pressure rooms.
- 5) Maintain all necessary records/documentation regarding assessments of negative pressure rooms for 5 years.

H. Training

At LAMC the Area Medical Director, Hospital Executive Director, MGA is responsible for overseeing the ATD training program, including the following elements:

- 1) Ensure the education is provided by someone knowledgeable in the subject matter covered and is appropriate to educational background, literacy and language background of participants, and that there is time allocated for interactive questions and answers during the training sessions
- 2) All employees will receive ATD training during New Employee Orientation (NEO) and annually thereafter not to exceed the 12 months. Additional training will be provided when changes to controls, tasks or procedures affect the employees. Training shall include any changes, modification, or addition to the plan.
- 3) Training material must be appropriate to the literacy and education level of the employees. Training is conducted initially at new hire orientation and annually on-line through KP Learn.
- 4) Training shall include an opportunity for interactive questions and answers with a person who is knowledgeable in the subject matter. Training that is not given in person shall provide answers to questions within 24 hours by a knowledgeable person.
- 5) At a minimum, the training program shall include:
 - a) location of the regulatory text of the ATD Standard and explanation of its contents;
 - b) general explanation of ATDs including signs and symptoms that require medical evaluation;
 - c) modes of disease transmission and the differences between TB infection and disease; applicable source control procedures; consequences and treatment of ATD, including role of incomplete treatment in the development of drug resistant pathogens e.g. MDR TB;
 - d) An explanation of the facility ATD Exposure Control Plan including the Employer and employee's responsibilities in preventing ATD transmission, the Medical Center procedures designed to prevent ATD exposure (e.g. prompt identification, referral and patient isolation), and methods used to communicate to staff the presence of suspected or confirmed ATD cases;
 - e) how to obtain a copy of the facility's Exposure Control Plan (ECP) and how to provide input;

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 18 of 60

- f) tasks and activities that may put the employee at risk for ATD;
 - g) explanation of engineering and work practice controls, decontamination and disinfection procedures, and use of PPE;
 - h) explanation of PPE selection, use and limitations, and the types, proper use, location, removal, handling, cleaning, decontamination and disposal of the PPE required for use;
 - i) TB surveillance procedures, requirement and information that immune-compromised persons may have false negative test for latent TB infection;
 - j) Training that meets requirements of the Cal/OSHA Respiratory Protection Standard (8 CCR 5144) for those employees required to use a respirator;
 - k) Vaccines information including seasonal influenza vaccine and their availability (free of charge);
 - l) Procedures for reporting exposure incident, medical follow-up and post exposure evaluation; and
 - m) Information on the medical center's surge plan and emergency management plan
- 6) Ensure that documentation of training records for all employees will be kept for a minimum of 3 years and will contain employee name or identifier, dates of training and name of instructor.

J. Record Keeping:

- 1) A Medical Record for each employee with an occupational exposure will be created and maintained as an accurate documentation of that exposure. It will include;
 - a) Employee's name;
 - b) Other employee's evaluated in the incident;
 - c) Date of the exposure incident;
 - d) The disease or pathogen to which the employee may have been exposed; The name and job title of the person performing the evaluation;
 - e) The identity of any local health officer and/or PLHCP consulted
 - f) The date of the evaluation;
 - g) Employee's vaccination status for all vaccines required, record of any vaccines given or declined;
 - h) A copy of all written opinions provided by a PLHCP, including results of all TB assessments and other test results provided;
 - i) A copy of the exposure incident information provided to the PLHCP;
- 2) All information is kept confidential and only released with the employee's written permission.
- 3) The medical record is maintained for the duration of employment plus 30 years per policy EH 3011.
- 4) The date of contact and contact information for other employers who are notified regarding potential employee exposures to ATPs.
- 5) Records of the unavailability of vaccine shall include the name of the person who determined the vaccine was not available, identity of the person providing the vaccine availability information and the date of contact. This record is kept for 3 years.
- 6) Records of the unavailability of All rooms should include the name of the person who determined an All room was not available, names of persons contacted for transfer possibilities, date of contact, contact information for the local health officer providing assistance. Do not include information that would identify the patient. Retain these records for three years.
- 7) Records of decisions not to transfer a patient to another facility for All for medical reasons should not include information that would identify the patient. Retain these records for three years.
- 8) Maintain all necessary records/documentation regarding assessments of negative pressure rooms for 5 years.
- 9) Documentation of training records for all employees will be kept for a minimum of 3 years and will contain employee name or identifier, dates of training and name of instructor.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 19 of 60

- 10) Records of inspection, testing and maintenance of engineering controls, including ventilation and other relevant air handling or filtration systems shall be maintained for a minimum of five (5) years and shall include the name(s) and affiliation(s) of the person(s) performing the test, inspection or maintenance, the date, and any significant findings and actions that were taken. At this facility, these records are kept by the Plant Services Department.

4. EXPOSURE PREVENTION AND HIERARCHY OF CONTROLS:

Overview: The prevention of ATD exposure(s) is dependant upon the effective implementation of Administrative, Engineering and Work-practice Controls. Such Controls require prompt identification of suspect and/or confirmed ATD cases, consistent containment of the infectious source pathogen through the use of respiratory etiquette practices (covering of cough, patients wearing surgical mask during transport or in waiting rooms, employee respiratory protection (PPE) during provision of patient care and high hazard procedures and airborne infection isolation rooms or areas (AIIR) for suspect of confirmed cases.

The following provides specific information regarding each of these essential control measures and should be consistently implemented to prevent avoidable employee exposure to ATDs.

In the event of a pandemic, the medical center will activate its Emergency Operations Plan (EOP) and Surge Plan where applicable

Source Control Procedures:

- Educate visitors and patients to cover nose and mouth with a tissue when they cough or sneeze and reinforce using appropriate signage.
- Provide respiratory "etiquette stations" at facility entrances and public waiting areas stocked with hand sanitizer, tissues and surgical masks.

Prompt Identification of Suspected ATD and TB Cases:

- A. The diagnosis of suspected ATDs, including TB, must be based on the patient's clinical presentation and/or findings. Findings to be considered when including various ATDs in a differential diagnosis are based on history, physical examination, chest x-ray and sputum.
- 1) Epidemiology of TB
 - a) Country of origin/residence with high incidence of TB,
 - b) Known (+) TST,
 - c) Remote exposure to TB without laboratory confirmation or subsequent TST,
 - d) HIV infected or immunocompromised.
 - 2) Symptoms as appropriate to the specific ATD including but not limited to:
 - a) fever,
 - b) chills,
 - c) upper respiratory symptoms including cough, etc.
 - d) night sweats,
 - e) weight loss,
 - f) hemoptysis
 - g) rash
 - h) stiff neck
 - i) other systemic symptoms as applicable
 - 3) CXR
 - a) Location of disease - apical posterior segments,

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 20 of 60

- b) Type of disease - cavitation, infiltrates, fibrosis.
- 4) Sputum:
 - a) Suspect: AFB smear positive;
 - b) Confirmed: AFB smear positive or negative; AFB culture positive for *M. tuberculosis*.
- 5) Serology and/or other cultures as indicated
 - a) Positive culture or PCR result
- B. Medical Offices, Emergency Department, and Medical Advice will follow established protocols for identifying and managing patients with known or suspected ATDs.
 - 1) The best means for diagnosis is by clinical assessment by the attending physician when considering the epidemiology, symptoms, radiology results, sputum culture or other clinical laboratory results.
 - a) Recognition of the many and varied presentations of ATDs and the lack of specificity of the main symptoms of ATDs make it difficult to accurately stratify a patient's risk of ATD based on a single rigid set of criteria.
 - b) Physicians should indicate the need for droplet or airborne precautions on admission orders as soon as ATD diagnosis is suspected.
 - 2) Patients with suspected ATDs should be masked with a surgical mask as soon as a tentative diagnosis is made unless medically contraindicated.
 - a) Admission to the medical center is not mandatory.
 - b) Notify County Public Health by fax or telephone at (213) 745-0800 as appropriate
 - c) Fill out CMR and any other county specific required forms.
- C. KP Regional Laboratory will report positive Acid-fast bacilli (AFB) smear and other applicable test results to physician and the IPC Professional.
- D. Management and treatment of ATD in children and adults is directed by the Infectious Disease and/or other specialists as indicated.

Engineering/Administrative Controls:

Overview: Engineering controls in the form of negative pressure airborne infection isolation (All) will be provided for a known or suspected infectious AirID case to prevent exposure of employees to air contaminated by the patient. Isolation must continue until there is a medical determination that the patient is no longer infectious. When engineering controls are not feasible, effective administrative controls or personal protective equipment (e.g., respirators) are used. An example of an administrative control is masking an infectious patient in transit.

Some aerosol transmissible disease require Droplet Precautions. These diseases require a private room but not negative pressure (All) rooms. (See **Appendix E** for a list of diseases/pathogens requiring Airborne Infection Isolation and those diseases/pathogens requiring a private room and Droplet Precautions)

- A. Airborne Infection Isolation (All), "Negative pressure" Rooms:
- B. All patients suspected of having an AirID and patients with confirmed Air ID including active pulmonary TB (suspected active TB is defined as positive AFB smears) not on effective TB treatment who are admitted to the Medical Center will be placed in a negative pressure airborne infection isolation (All) room with an equivalent of 12 air exchanges (ACH) per hour that is vented to the outside or has High Efficiency Particulate Air (HEPA) filtration. In this facility, Airborne infection isolation (All) rooms are located as follows:

<u>Unit</u>	<u>Room Number</u>
PACU	83
Emergency Dept.	12, 13

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 21 of 60

CSU West	3105, 3112
CSU East	3325, 3332
L&D	4551
Post Partum West	4104, 4113
Post Partum East	4324, 4333
NSU	5105, 5112
PICU	5325, 5332
Peds	5548, 5549
ICSU	5779
ICU West	6105, 6112
ICU East	6325, 6332
6 East Telemetry	6550
6W Onc/Med/Surg	6779
CCU West	7105, 7112
CCU East	7325, 7332
7E Ortho/Med/Surg	7550
7W Telemetry	7779

Information indicating precautions visitors and staff must follow to enter the room will be posted

- C. Engineering should provide the minimum of 12 ACH to isolation rooms and negative pressure exam rooms.
- D. Suspected or confirmed AirID (patients requiring Airborne Isolation precautions) patients undergoing high-hazard medical procedures such as bronchoscopy, open lancing of TB lymph nodes, or cough-inducing treatments such as administration of aerosolized Pentamidine, will be placed in negative pressure All rooms or areas such as a ventilated booth, tent or hood. If the ventilation in these rooms or areas is not directly exhausted to the outside, a portable HEPA filtering unit ("scrubber") or other type of HEPA-filtration must be utilized.
- E. If admitted, a suspected or known AirID patient should go directly to a negative pressure exam room or All room and wear a surgical mask during transport from the exam room in the clinic or the Emergency Department.
- F. Doors to negative pressure rooms should be kept closed, except when patients or personnel must enter or exit the room when ante-room is not available, so that negative air pressure can be maintained.
- G. In facilities with Airborne Infection Isolation rooms equipped with negative pressure alarms, these alarms are connected into our building management system providing 24/7 operation and monitoring.
- H. When an AirID case or suspected AirID case vacates an All room or area, the Department manager will ensure that the room or area is ventilated according to the following table for a contaminant removal efficiency of 99.9% before permitting employees to enter without respiratory protection:

Table 1. Air changes per hour (ACH) and time required for removal efficiencies of 99% and 99.9% of airborne contaminants.*

ACH	99% Min Wait Time	99.9% Min Wait Time	Recommend Wait Time Poor Mix Room
2	138	207	621
4	69	104	312
6	46	69	201
12	23	35	105
15	18	28	84
20	7	14	52

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 22 of 60

50	3	6	18
----	---	---	----

*This table can be used to estimate the time necessary to clear the air of airborne *Mycobacterium tuberculosis* after the source patient leaves the area or when aerosol-producing procedures are complete. Column 1 and 2 are when ideal room air mixing occurs and column 3 represents wait times when imperfect or poor room air mixing occurs.

Example: For Airborne Infection Isolation rooms operating at 12 Air Exchanges per hr in pts rms, (10 Air Exchanges per hr in Ante Rooms) Respirator mask will be worn for two hours post discharge of patient

- A. Environmental Services will be notified when the patient is discharged, and asked to do discharge cleaning of the room using N95 respiratory protection
 - 1) Engineering Control System Management:
- B. Negative pressure shall be maintained in airborne infection isolation (All) rooms or areas. The ventilation rate for Airborne Infection Isolation rooms must be at least 12 air changes per hour (ACH), achieved with supplementation by HEPA filtration units as necessary but in no case shall the outdoor air supply ventilation rate be less than 6 ACH. Engineering is responsible for ensuring that these criteria are met.
- C. Negative pressure must be checked daily using smoke trails or an equally effective means of visually confirming negative pressure while the Airborne Infection Isolation room or area is occupied by a suspect or confirmed AirID patient. The means for confirming negative pressure must be independent of any Airborne Infection Isolation room pressure monitoring system and should provide visual confirmation that air is flowing into the Airborne Infection Isolation room. Negative pressure should be checked monthly when the Airborne Infection Isolation room is not in use. At this facility, Plant Services is responsible for checking and documenting All room negative pressure using the Tissue Test.
- D. Air from negative pressure airborne infection isolation rooms or areas must be exhausted directly to the outside away from intake vents, employees and the general public. Air that cannot be exhausted in this manner or that must be recirculated will be filtered through HEPA filters before discharge or recirculation. Engineering shall monitor these systems.
- E. Engineering shall ensure that the ventilation systems for negative pressure isolation rooms or areas and any local exhaust ventilation systems used to control ATD exposures are properly maintained, and tested and certified annually. Please see Plant Services policies 2010 for information regarding maintenance, upkeep and testing of negative pressure rooms and local exhaust ventilation.
- F. Local Exhaust Ventilation (e.g., booth, hood, tent or other ventilated enclosure):
 - 1) Local Exhaust Ventilation is used in this facility.
 - 2) Local exhaust ventilation systems must be maintained per manufacturer's recommendations and tested and certified at least annually. At this facility Engineering is responsible for this function.
 - a) Other engineering controls such as HEPA filtration units must also be maintained, inspected and performance monitored for filter loading and leakage at least annually, whenever filters are changed and more often if necessary to maintain effectiveness or to meet more stringent manufacturer instructions. HEPA filter replacement must be performed by adequately trained personnel wearing N95 respiratory protection. At this facility, HEPA filtration unit management is performed by Plant Services.
 - b) Records of inspection, testing and maintenance of engineering controls, including ventilation and other relevant air handling or filtration systems shall be maintained for a minimum of five (5) years and shall include the name(s) and affiliation(s) of the person(s) performing the test, inspection or maintenance, the date, and any significant findings and actions that were taken. At this facility, these records are kept by: Plant Services.
- G. Patient Isolation

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 23 of 60

Isolation rooms shall have negative pressure relative to the outside, and 12 air exchanges per hour for new construction and shall be vented to the outside of the facility or shall have air filtered through HEPA filters before it is re-circulated within the facility. Consider use of local exhaust where feasible as described in Engineering/Administrative Controls section.

- 1) In this facility, the Admission Department and the admitting unit shall be notified by telephone of the admitting diagnosis prior to the admission.
- 2) Patients suspected of having TB will be kept in AIIR isolation/airborne precautions until deemed to be non-infectious e.g. no longer symptomatic, and 3 sputum smears (collected at least 8 hours apart at least one being an early morning or induced sputum) are negative for acid-fast bacilli (AFB).
- 3) Patient will be instructed to wear a surgical mask when outside of the isolation room.
- 4) Readmitted patients who are known to have active TB and have not completed therapy should have airborne precautions initiated and continued until 2-3 sputum smears are negative for AFB.
- 5) Patients with confirmed active TB on chemotherapy will be kept in airborne precautions for at least 2 weeks and until 2 –3 sputum smears are negative for AFB, and until clinical response is demonstrated.
- 6) If multiple drug resistant TB is suspected, patient will remain in airborne precautions until multiple drug resistance is ruled out.
- 7) If the TB isolation room **IS** a negative pressure room with 12 air changes per hour, the room needs to be closed for a minimum of 35 - 105 minutes before entering to clean depending on the air mixing characteristics of the room (see Table 1 on page 27), unless respiratory protection is worn, once a patient is discharged. If the room **IS NOT** a negative pressure room (e.g. patient is placed in the room on an interim basis until negative pressure room is ready), upon patient discharge the room needs to be closed for 2 ACH or 138 Minutes (refer to Table 1 above as needed).
- 8) If an isolation room is occupied by a patient **not** requiring a negative pressure room, this patient will be transferred immediately to another appropriate room.
- 9) TB patients will be placed in an AIIR within 5 hours of identification or will be transferred to another suitable facility for isolation.
- 10) Questions concerning the appropriateness of airborne precautions, initiation of treatment and referral of TB cases to other facilities will be resolved by the Chair of the Infection Control Committee or designee.

H. Patient Discharge

- 1) The attending MD of record must complete the patient's discharge treatment plan as soon as possible, no later than 24 hours prior to patient discharge.
- 2) The Infection Prevention and Utilization Management Administrators or designees will ensure that the patient's discharge treatment plan is submitted and approved by the Health Department prior to discharge and will make a statement in the patient's "progress notes" that the form was faxed to the Public Health Department.
- 3) Any changes to the TB discharge plan from the Health Department are to be sent to the Medical staff for review/discussion prior to patient discharge.
- 4) Patients with active TB that must be transferred from one facility to another should be transported in a portable negative pressure HEPA unit where available.

I. Respiratory Protection

- 1) All employees involved in the care of known or suspected pulmonary TB or ATD cases will be medically evaluated, fit tested and trained in the use of an N-95 or higher level respirator per the facility's Respiratory Protection Program. Note use of a PAPR does not require test fitting.
- 2) This facility's Respiratory Protection Program Administrator is the Environmental Health and Safety Director.
- 3) Employee shall use a minimum of a N-95 respirator when the employee:

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 24 of 60

- a) Enters a negative pressure airborne infection isolation (All) room or area occupied by a known or suspected AirID case;
 - b) Enters an airborne infection isolation room for decontamination or other procedures after the known or suspected AirID case has left unless a sufficient period of time has elapsed to achieve 99.9% clearance (see Table 1);
 - c) Is present during the performance of procedures or services for an AirID or airborne infectious disease case or suspected case; or is present during an aerosol-generating procedure performed on a cadaver suspected of being infected with an AirID;
 - d) Repairs, replaces or maintains air systems or equipment that may contain aerosolized pathogens (e.g., changing HEPA filters or accessing ventilation ducts used to remove ATD pathogens like TB bacteria);
 - e) Transports an unmasked known or suspected AirID case within the facility or in an enclosed vehicle (e.g., van, car, ambulance), unless the respirator may interfere with the safe operation of that vehicle in which case other protections (barrier, source control) shall be used if feasible
- 4) Effective Sept 1, 2010, employees shall wear a minimum of a powered air purifying respirator (PAPR) with a high efficiency particulate air (HEPA) filter or equivalent when:
- a) Performing or present during the performance of a high-hazard procedure on suspected or confirmed airborne Infectious disease patients or cadavers potentially infected with ATD. See Appendix B for a list of high hazard procedures.
 - EXCEPTIONS: A PAPR is not required during the performance of a specific high hazard procedure if:
 - The determination is made by the clinician in charge of the procedure that the use of a PAPR would interfere with the successful performance of the required task or tasks. This determination must be reviewed by the ATD Exposure Control Program Administrator and employees at least annually.
 - The high hazard procedure is performed by placing the patient in a booth, hood or other ventilated enclosure that effectively contains and removes the aerosols resulting from the procedure, and the employee remains outside of the enclosure. In this case, the employee must use at least an N95 respirator.
 - b) Employees have a beard, have failed or cannot be fit tested for an N-95 respirator (see facility Respiratory Protection Plan).
- 5) Medical Evaluation
- Medical evaluations for respirator use will be provided to new and transferring employees who will be working in positions where there is exposure to patients with confirmed or suspected ATDs. Medical evaluations will be specific to the respirator(s) to be used by the employee. At this facility, medical evaluations for respirator use will be performed by Employee Health Services and in accordance with the site Respiratory Protection Program with the following exception:
 - EXCEPTION: Employees who are assigned to wear a respirator for protection from exposure to ATDs may be evaluated using either the standard medical evaluation questionnaire (**Appendix D**) or the alternate questionnaire in **Appendix D** of this Plan.
- 6) Respiratory Protection Training
- a) Training shall be completed initially upon hire and annually thereafter at this facility in accordance with the facility's Respiratory Protection Program.
- 7) Fit Testing
- a) Fit testing will be accomplished by Environmental Health and Safety as designated by local administration, and in accordance with the facility Respiratory Protection Program.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 25 of 60

- b) Each employee who is assigned to use a filtering face piece (e.g., N95) or other tight-fitting respirator must pass a fit test:
 - At the time of initial fitting;
 - When a different size, make, model or style of respirator is used;
 - When there is a change in facial configuration, e.g., weight gain or loss, develop medical condition or significant dental work
 - At least annually thereafter.
 - EXCEPTION to Annual Fit testing: Until January 1, 2014, fit testing may occur every two years for employees who do not perform high hazard procedures and who are not using respirators for protection from laboratory-generated aerosols. Employees who do not receive annual fit testing must be provided with a respirator fit test screening in place of the fit test (i.e., within 12 months of the employee's last fit test). This screening must contain specific information required by the Cal OSHA ATD Standard. This facility's "Information for Fit Test Screening" form which meets Cal OSHA requirements is found in **Appendix D** of this Plan. The record of this screening will be kept for two years by Employee Health.
 - Records of employees who are fitted, including name, social security number (or medical record number), date of test and respirator brand and size, will be maintained in the EHS data base as part of the employee record.
- 8) Responsibilities
 - a) The department manager is responsible for maintaining an adequate supply of respirators in the required sizes for department personnel use.
 - b) The department manager is responsible for assuring that employees wear and, as appropriate, handle and store the respirator as required to prevent possible exposure to ATDs.
 - c) The employee is responsible for inspecting the respirator before each use to ensure that it is not damaged, moist or visibly soiled, and for checking the fit of the respirator before use to ensure a good face seal can be achieved.
- 9) Re-donning N95 Respirators
 - a) N95 respirators may be re-donned under certain conditions of reduced respirator supply. At this facility, there is a process to determine supply adequacy which is implemented by Materials Management. Infection Prevention and the Environmental Health and Safety Director will jointly assess if re-donning is indicated based on the event at hand, coordination with Materials Management regarding available mask supplies and determination of impact of all relevant risk factors related to respirator re-donning.
 - b) At this facility, Infection Prevention and the Environmental Health and Safety are responsible for ensuring that employees are trained on re-donning procedures, including proper handling, respirator assessment and storage.
 - c) Respirators will be inspected before each use and will not be worn if visibly soiled, moist, damaged, breathing through it is difficult or it cannot achieve a good face seal.
 - d) Respirators used in surgery or for high-hazard procedures must be discarded after each use and may not be re-donned.
 - e) Respirators will be discarded at the end of the shift.
 - f) A face shield may be worn to protect the outer surface of the respirator from sprays and splashes, as long as the face shield does not interfere with the function of the respirator.
 - g) Surgical masks may not be worn over the N95 respirator as they may unseat or deform the respirator, and the combination may be more difficult to breathe through.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 26 of 60

5. Work Practice Control:

- A. Standard Precaution shall apply to all patients in the medical center. Standard Precaution requires that personal protective equipment (PPE) to be used when in anticipation of exposure to blood and body fluid.
- B. All employees involved in the care of known or suspected pulmonary TB or ATD case will be fit tested and trained in the use of an N-95 respirator at minimum per Medical Center Respiratory Protection Program.
- C. The employer will provide appropriate respiratory protection.
- D. During the fit testing process, every respirator wearer will be instructed in how to properly fit check and test an N-95 respirator, when and how to wear it, sanitary care and its limitations. In addition, opportunity will be provided to wear the respirator in room air for an adequate familiarity period.
- E. Re-don of the N-95 respirator between patients is permitted but must be in compliance with established protocol as stated above.
- F. Persons should not be assigned to tasks requiring use of an N-95 respirator unless it has been determined that they are physically able to perform their work while using the required respirator.
- G. Known or suspected ATD patients including pulmonary TB patients will be masked with a surgical mask when outside the isolation room.
- H. Visitors/families of patients with a known or suspected ATD will wear a surgical mask when in the patient's room.
- I. Hand hygiene must be performed after removal of any PPE.
- J. Environmental Cleaning: All patient care equipment must be cleaned and processed between patients and the rooms must be cleaned following hospital policy. See policy and procedure MCW #6320.

6. Special Considerations in the Peri-operative and L&D Areas

- A. Surgical procedures on a patient with suspected or known ATD including pulmonary TB where mechanical ventilation may or may not be required:
 - 1) Only emergency procedures should be performed until effective treatment has been completed for the ATD or 3 consecutive negative AFB smears for TB
 - 2) If at all possible, schedule the case at the end of the day
 - 3) The patient should remain in a negative pressure room as long as possible before the procedure and transfer directly to the operative area if possible
 - 4) As many pre-operative procedures as possible should be performed in a negative pressure room.
 - 5) Limit entrance to operative area only by staff with proper respiratory protection
 - 6) If the patient is to be mechanically ventilated, the patient's entry into the surgical suite should be timed such that mechanical ventilation is accomplished as soon as possible after entry.
 - 7) If the patient is to be mechanically ventilated, assure that the ventilator has the appropriate filters to prevent exhaust of ATD particles including TB droplet nuclei.
 - 8) Staff in contact with the patient while in the surgical suite and in the OR room with the patient should wear surgical N-95 respirators.
 - 9) Patient should be recovered in a negative pressure airborne infection isolation room if required by disease. If a negative pressure room is not available in the recovery area, then the patient should recover in a negative pressure room where available and appropriate for the care.
 - 10) Following the patient's exit from the OR room, an N-95 respirator must be worn by any person(s) cleaning or entering the room prior to the minimum clearance time determined by the number of air changes in the room (see Table 1).

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 27 of 60

- 11) All laboratory and/or pathology specimens should be clearly labeled indicating patient's suspected or known ATD status.

7. EXPOSURE CONTROL AND FOLLOW-UP:

An employee exposure to TB is defined as an occurrence of prolonged contact (30 minutes cumulative contact) with a patient who has pulmonary or laryngeal TB with positive *M. tuberculosis* smears where no exposure prevention measures have been initiated.

An employee exposure follow-up to ATD other than TB shall be based on disease case definition, incubation period, prophylaxis availability, and other pertinent information as determined by the Infection Preventionist and/or Infectious Disease physician.

In the event of an employee exposure:

A. Department managers will:

- 1) identify exposed personnel;
- 2) submit written list of exposed employees to EHS;
- 3) upon verification of exposure by EHS, instruct appropriate employees to report to EHS for follow-up per protocol.

B. Infection Prevention and Control Professional will:

- 1) in conjunction with the Department Manager, verify that an exposure has occurred;
- 2) notify affected department managers and EHS for employee follow-up;
- 3) evaluate possible reasons for exposure and implement interventions to prevent repeated occurrences;
- 4) keep the IC Committee informed of the exposure incident evaluation and present a final report as appropriate.

C. Employee Health Service will:

- 1) notify affected department managers of verification and of need for employee follow-up;
- 2) evaluate exposed employees for signs/symptoms of ATD or TB and/or perform TST as appropriate per current EHS protocol; no later than 96 hours after becoming aware of a potential exposure, notify employees who had significant exposure of the date, time and nature of that exposure. The evaluation should include appropriate vaccination, prophylaxis and treatment recommended for the exposed employee.
- 3) refer all TST conversions to an appropriate physician or Nurse Practitioner/Physician's Assistant as designated for medical evaluation and preventive therapy in a timely manner (see **Appendix D**);
- 4) document induration in millimeters for all TST conversions resulting from occupational exposure, and report to appropriate local and state agencies as required;
- 5) ensure all TST conversions resulting from occupational exposures are sent to HR Service Center who will record on the OSHA 300 Log and indicate a "respiratory condition";
- 6) keep the Infection Control Committee advised of the progress of the employee evaluations and present a final report of conversion rates.
- 7) Document a written opinion of the medical evaluation, employee's infectivity status, a statement that the employee has been informed of the results of medical evaluation, treatment options and any recommendations as appropriate. Refer to EHS policy 2008 for complete details.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 28 of 60

8. ATD and TB SURVEILLANCE

A. NEW EMPLOYEES:

- 1) All new employees will receive a 5TU TST skin test at the time of their pre-placement health assessment. If the new or transferred employee presents documentation of having had a 5TU TST skin test that was read to be negative by an authorized/trained medical professional (MD, NP, RN or LVN) within the last three months, the test can be waived unless the EHS deems a skin test to be necessary. New employees should complete the 5TU two-step procedure if they cannot provide written documentation of a previous negative skin test completed within the past two years.
- 2) New employees with no prior history of TST shall have a two-step test performed.
- 3) New employees with a prior positive TST skin test history but no written documentation of the positive TST skin test will complete a 5TU TST skin test. If the first step is non-reactive a second step, with 5TU, will be done.
- 4) New employees with a history of BCG vaccination and with no history of TST will also have a 2 step TST administered.
- 5) New employees with prior history of positive TST will have a baseline chest x-ray prior to employment unless a copy of a report of a negative chest x-ray completed (available digitally) within the last 12 months can be provided.

B. ONGOING SURVEILLANCE/TB SCREENING:

- 1) Any employee in a designated high-risk department as identified in the most recent CDC TB Risk Assessment (list all high risk departments in your facility: All departments will receive TB skin testing (if previous skin test negative) or complete a Positive TST Screening Questionnaire – **Appendix C**.
- 2) Any employee not in a designated high risk department will receive TB skin testing (if previous skin test negative) or will complete a Positive TST Screening Questionnaire – **Appendix D** (if previous skin test positive) every 12 months, as coordinated by EHS.
- 3) If there is a cluster of conversions at any time (more than 2) in one department, screening needs to be repeated in 3 months on all employees in that department at that time.

9. N-95 RESPIRATOR FIT-TESTING ROLES AND RESPONSIBILITIES

- A. New employees hired for positions in departments where exposure to patients with confirmed or suspected ATD or pulmonary TB is likely will fill out a questionnaire (“Medical Evaluation Questionnaire”), (**Appendix D**), be trained and be fit-tested prior to working with ATD patients, within the first week of work.
- B. Fit testing will be accomplished by Environmental Health and Safety as designated by local administration.
- C. Employees who are transferred to a department where exposure to patients with confirmed/suspected ATD or pulmonary TB is likely will fill out a questionnaire, “Medical Evaluation Questionnaire” (**Appendix C**) and be fit-tested.
- D. Records of employees who are fitted, including name, social security number (or medical record number), date of test and respirator brand and size, will be maintained in the EHS data base as part of the employee record.
- E. After being fit tested at time of hire, employees must complete an annual questionnaire within 12 months of being fit-tested, review and sign provided educational material. (Information for Respiratory Fit-testing Screening - **Appendix D**)
- F. EHS will be responsible for informing managers when the annual questionnaire is due for their employees.
 - 1) The employee is responsible for returning the questionnaire to EHS.
 - 2) EHS will evaluate the questionnaire and inform the employee if re-fit testing is needed.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 29 of 60

- G. The department manager is responsible for maintaining an adequate supply of respirators in the required sizes for department personnel use.
- H. The department manager is responsible for assuring that employees wear the respirator as required to prevent possible exposure to TB.
- I. The employee is responsible for retaining his/her own respirator for personal use until the integrity of the respirator is compromised or it becomes visibly soiled or moist.

10. Provision of PPE and Product Supply maintenance:

Overview: All patient care and exposure control related supplies and equipment required by this ECP will be managed through the medical center product support and established Materials Management Services procedures. Such management and identified par levels will be based on the annual assessment and identified patient care needs and/or specialty services provided at the medical center.

Note: Critical supplies may be sequestered to assure availability in a surge situation and respirator re-donning procedures may be instituted to facilitate maintenance of adequate supplies. Additional supplies and equipment will be managed/supported through Regional Product Support and Purchasing processes that assure adequacy of the supplies needed for patient care. Product supplies and equipment redistribution will be coordinated through existing Emergency Operation Center (EOC) Protocols as defined by medical center and Regional EOC operations utilizing the established incident command center policies and procedures. (See Medical Center EOC policy and procedure operations manual.)

11. Obtaining employee input for the review and updating of the ATD Exposure Control Plan.

At Los Angeles Medical Center this policy and procedure is reviewed annually by a multidisciplinary team that has knowledge and understanding of the regulatory requirements and operations of the facility.

12. Surge procedures: Refer to Medical Center Policy # MCW 6270.

13. Other Documentation Revise to make Facility specific:

Additional information regarding TB prevention may be reflected in:

- Injury and Illness Prevention Program (Policy name/number _____);
- Employee TB and respiratory fit testing records (location of records: Employee Health Department;
- Cal/OSHA 300 log (location of log: Employee Health Department;
- Employee TST skin test results (location of test results: Employee Health Department;
- EHS TB exposure records (location of TB records Employee Health Department;
- Respiratory Protection Program document addressing TB (policy#/location: 6220/LAMC policy and procedure website);
- Engineering Dept. ventilation documentation - location of records: Plant Services Office.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 30 of 60

Appendix A

Cal/OSHA Guidance for the 2010-2011 Influenza Season regarding the Application of the Aerosol Transmissible Diseases Standard (Issue Date: 11/5/2010)

In September 2010, the Centers for Disease Control and Prevention (CDC) published "[Prevention Strategies for Seasonal Influenza in Healthcare Settings](#)", which [supersede previous CDC guidance for 2009 H1N1](#) and for seasonal influenza. [The California Department of Public Health \(CDPH\) has issued guidance](#) concurring with these recommendations and emphasizing the need for specific precautions for activities that increase the risk of transmission. The purpose of this guidance is to explain how Cal/OSHA's Aerosol Transmissible Diseases Standard 1 (ATD standard) applies during the 2010-2011 influenza season with regard to protecting employees against contracting influenza in health care and other workplaces and operations covered by the standard.

Revised CDC and CDPH Recommendations

When the 2009 H1N1 influenza virus was first detected, the CDC and CDPH recommended airborne infection isolation procedures, including the use of respirators, for all contact with suspected or confirmed cases. After reviewing the experience to date with this virus and the effectiveness of the influenza vaccine, the CDC has recommended the use of standard and droplet precautions for patient contact other than aerosol generating procedures, and the CDPH has adopted those recommendations.

Droplet precautions permit the use of surgical masks rather than respiratory protection, i.e., use of respirators.

Recognizing that surgical masks do not provide protection against inhalation of airborne infectious aerosols, the CDPH has stated that facilities that implement surgical masks for contact with influenza patients should also consider making respirators available to health care personnel who prefer this level of protection.

The CDC and CDPH have also recommended airborne infection isolation measures, including the use of respirators, for aerosol generating procedures such as sputum induction, bronchoscopy, open suctioning, cardiopulmonary resuscitation, intubation, extubation, and autopsy procedures on people who are suspected or confirmed cases of influenza. These measures include:

- Only performing these procedures on patients with suspected and confirmed influenza if they are medically necessary and cannot be postponed;

- Limiting the number of health care personnel (HCP) exposed to the procedure;

- Conducting the procedures in an airborne infection isolation room when feasible;

- Considering the use of portable HEPA filtration units to increase effective ventilation rates in areas where procedures are performed;

- HCP wearing gloves, gown, and a face shield that fully covers the front and side of the face or goggles as part of standard precautions;

[1 California Code of Regulations, Title 8, Section 5199](#) Cal/

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 31 of 60

APPENDIX B: EXPOSURE DETERMINATION

This section describes which Kaiser Permanente health care workers are at risk of exposure to Aerosol Transmissible Diseases (ATD). **NOTE:** *Interns and students who are deemed Kaiser Permanente “employees” (as defined by Cal OSHA) are covered by this section when working in the capacity of one of the defined job classifications.*

The risk analysis divides the exposure determination into two main job categories, as described in the table below.

A. Job Categories

CATEGORY I *	CATEGORY II *
Job classifications in which all staff and Licensed Independent Practitioner are at risk of exposure to ATD	Job classifications in which some staff and Licensed Independent Practitioner are at risk of exposure to ATD (as is determined by the tasks a given health care worker performs)
Assistants/ Care Partners/ Home Health Aides	Chaplains
Clinic Assistants	Clerks (i.e., Admitting, ER, Laboratory, Imaging)
Dental Assistants	Dietitians/Dietary Workers
Dentists	Mental Health Staff
Environmental Services/ Housekeeping	Nursing Supervisory Personnel
Hygienists	Pharmacists
Laboratory Personnel (i.e., Clinical and Pathology)	Optometrist
Nurses (i.e., RN, LVN, Nurse Practitioner, CRNA, Mid-wives)	Social Workers
Orderlies, Transporters (i.e., patient)	Volunteers
Physicians, Physician Assistants and Extenders	Safety
Security	Couriers, medical equipment and supply transporters
Technicians/Technologists (i.e., CT, Anesthesia, EEG, EMT, Nuclear Medicine, OR, Pulmonary, Radiology, Surgical, Ultra Sound, Care Partners)	Contractors who may work in high risk area
Plant Services/Operations	Technicians/Technologists (i.e., Biomedical Engineering, ORTHO,
Transporters – Medical (i.e., First Responders, EMT, Specimen)	Therapists (i.e., Occupational, Physical, Orthopedic, Physical, Speech, Respiratory)

* There are occasions (e.g., disasters or work stoppages) when health care workers who are not listed in Category I or II may be asked to perform duties involving occupational exposure to bloodborne pathogens. In such instances, appropriate actions will be taken to ensure fulfillment of applicable aspects of this exposure control plan.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN	Facility policy #
Effective Date: August 2009 Revision Dates: September 2013	Page 32 of 60

1. High Hazard Tasks and Procedures Involving Occupational Exposure :

The following table lists typical tasks that involve potential occupational exposure, including required engineering and work practice controls, and personal protective equipment for each.

High hazard procedures performed at this facility are highlighted in the table and listed here:

- Administration of nebulizer or aerosolized medication, including Pentamidine
- Autopsy
- Bronchoscopy
- Centrifugation
- **CPR (if patient safety is not compromised)**
- Engineering Practices some instances
- Intubation
- Laboratory testing of viral cultures
- Lancing TB lymph nodes
- Nasopharyngeal Cultures
- Nasal/endotracheal suctioning
- Pulmonary function testing
- Sputum induction
- Ventilator disconnecting

High hazard procedures require the use of a Powered Air Purifying Respirator (PAPR) when performed on a individual with a suspected or confirmed AirID unless the use of a PAPR would interfere with the successful performance of the task or the procedure is performed with the patient inside an enclosure that contains and removes the aerosolized particles and the employee remains outside the enclosure.

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 38 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Work Practices						Personal Protective Equipment				
	Use of Engineering Controls (e.g., sharps safety devices)	Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
Abscess – Assisting with irrigation and drainage	R	R	R	R	R	R	R	S	**	**	N
Anesthesia circuit disconnection	R	R	R	R	R	R	R	S	**	**	N
Applying pressure to control bleeding	R	R	R	R	R	R	R	S	**	**	N
Arterial OR Central Venous Lines - insertion of	R	R	R	R	R	R	R	S	**	**	N
Assaultive behavior – managing	R	R	R	R	R	R	R	S	**	**	N
Autopsy care / Postmortem care during aerosol-generating activities on suspected or confirmed ATD patient (airborne or droplet)	R	R	R	R	R	R	R	R	**	**	P
Bathing Patients		R	R	R	R	R	R				N

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 39 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls													
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR													
Task/Procedure Involving Occupational Exposure	Use of Engineering Controls (e.g., sharps safety devices)	Work Practices					Personal Protective Equipment						
		Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient		
Blood drawing - Fingertstick / heelstick	R	R	R	R	R	R	R	R	R	S	**	**	N
Blood drawing-Venous/Arterial	R	R	R	R	R	R	R	R	R	S	**	**	N
Blood/Blood Products - Administering	R	R	R	R	R	R	R	R	R				N
Bronchoscopy	R	R	R	R	R	R	R	R	R	R	R	**	P
CPR (if patient safety is not compromised)	R	R	R	R	R	R	R	R	R	R	R		P
Centrifugation of specimens associated with ATD.	R	R	R	R	R	R	R	R	R	R	R	**	P
Cleaning - blood & body fluid (including spills)	R	R	R	R	R	R	R	R	R	R	S	**	N
Closed drainage system (pleuravac, hemovac, bulb) - changing or disconnecting	R	R	R	R	R	R	R	R	R	R	S		N

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 40 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Work Practices					Personal Protective Equipment					
	Use of Engineering Controls (e.g., sharps safety devices)	Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
Dip stick urine checks		R	R				**		**	**	N
Dressing change and dry wound care	R	R	R	R			R	S			N
Dressing removal	R	R	R				S				N
Dressing change and dry wound care	R	R	R	R			R	S			N
Dressing removal				S							N
Emesis – cleanup	R	R	R	R	S	**	**				N
Emptying foley bag, urinal, bed pans, emesis basin	R	R	R	R							N
Enema	R	R	R	R	R	R	R	S	**	**	N
Engineering Practices i.e.: Repair, Replace, Maintain or enter Isolation room	R	R	R	R	R	R	R	S	**	**	P
Fecal impaction – removal	R	R	R	R			R	S	**	**	N

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 42 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Work Practices						Personal Protective Equipment				
	Use of Engineering Controls (e.g., sharps safety devices)	Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
decontaminating		R	R	S		**	R	S	**	**	
IV – Discontinuing	R	R	R	R	R	R	R				N
IV catheter – tubing change at hub of	R	R	R	R		R	R				N
Lab testing Viral Cultures	R	R	R	R	R	R	R		**	**	P
Laceration care: extensive		R	R	R	R	R	R	S	**	**	N
Laceration care: simple		R	R				R				N
Lancing of TB lymph node	R	R	R	R	R	R	R	R			P
Linen – handling contaminated linen	R	R	R	R		R	R	S			N
Nasotracheal / Endotracheal: Suctioning	R	R	R	R		R	R	S	**	**	P
Nasotracheal / Endotracheal: Tube Insertion	R	R	R	R		R					N
Nasopharyngeal cultures	R	R	R	R		R	R			**	P
NG tube insertion	R	R	R	R		R	R	S	**	**	N

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 43 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Use of Engineering Controls (e.g., sharps safety devices)	Work Practices				Personal Protective Equipment					
		Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
NG tube irrigation	R	R	R	R	R	R	R	S	**	**	N
NG tube removal	R	R	R	R	R	R	R	S	**	**	N
Medications - giving (oral, IM, IV piggyback, IV push, Intra-dermal, SQ)	R	R	R	R	R	R	R	S			N
Oral suctioning	R	R	R	R	R	R	R	S			N
Ostomy care / irrigation	R	R	R	R	R	R	R	S	**	**	N
Oxygen mask / prongs/ cannula placement	R	R	R	R	R	R	R				N
Pentamidine (Aerosolized)	R	R	R	R	R	R	R				P
Physical assessment		R	R	R	R	R	R				N
P.I.C.C. – Insertion of	R	R	R	R	R	R	R	S	**	**	N
Plumbing – working on contaminated plumbing		R	R	R	R	R	R	S			N
Pulmonary Functions Tests	R	R	R	R	R	R	R	S		**	P

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 44 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Work Practices					Personal Protective Equipment					
	Use of Engineering Controls (e.g., sharps safety devices)	Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
Rectal suppository- inserting		R	R	R			R				N
Rectal temperature		R	R	R		R	R				N
Restraints / protective devices – applying		R	R				S				N
Routine vital signs		R	R								N
Specimen – collection	R	R	R	R	R	R	R	S	**	**	N
Specimen – processing and handling	R	R	R	R	R	R	R	S	**	**	N
Shampoo hair		R	R								N
Shave		R	R		R						N
Sitz bath		R	R								N
Sputum Induction	R	R	R	R	R	R	R	R		**	P

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 45 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Work Practices					Personal Protective Equipment					
	Use of Engineering Controls (e.g., sharps safety devices)	Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling/disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
Suction Apparatus – care and emptying (e.g., bedside - continuous and intermittent and portable suction units)	R	R	R	S		R	R	S	*	**	N
Suture removal - clean, dry wound	R	R	R	R							N
Suture removal -draining wound	R	R	R	R		R	R				N
Topical medication – applying	R	R	R				S				N
Tracheostomy Care	R	R	R	R		R	R		**	**	N
Tube feeding		R	R			R					N
Vaginal irrigation	R	R	R	R		R	R	S			N
Vaginal suppository - inserting		R	R	R		R	R				N
Venipuncture (Starting IV, Shunt Access)	R	R	R	R		R	R				N
Ventilator Disconnection	R	R	R	R		R	R			**	P

Kaiser Permanente National Policy

AEROSOL TRANSMISSIBLE DISEASES (ATD) EXPOSURE CONTROL PLAN

Facility policy #

Effective Date: August 2009

Page 46 of 60

Revision Dates: September 2013

Matrix Tasks and Procedures Involving Occupational Exposure & Exposure Controls											
Legend: R = Routinely necessary; S = If soiling is likely; ** = If splattering is likely, N = N95 or P = PAPR											
Task/Procedure Involving Occupational Exposure	Work Practices					Personal Protective Equipment					
	Use of Engineering Controls (e.g., sharps safety devices)	Universal Standard Precautions	Hand Washing (e.g., following removal of PPE)	Cleaning Work Area (e.g., wiping up blood and OPIM)	Safe Sharps Work Practices (e.g., proper handling and disposal)	Follow Protocol to Minimize Splash	Use of Gloves	Use of Gown / Plastic Apron	Use of Mask (fluid protective barrier)	Use of Eye Protection	Use of Respirator (N) N95/(P) PAPR if performed on an unmasked or suspected or confirmed AirID patient
Ventriculostomy device (shunt) - insertion of	R	R	R	R	R	R	R	S	**	**	N
Wound / orifice packing and removal	R	R	R	R	R	R	R	S	**	**	N
Wound irrigation	R	R	R	R		R	R	S	**	**	N

¹ = As of September 1, 2010, an N95 is no longer acceptable and a PAPR or equivalent respirator is required for this high-hazard procedure unless:

- a) The facility determines that PAPR use would interfere with the successful performance of the required task or tasks. This determination must be documented and reviewed at least annually per the Respiratory Protection section of this Plan; or
- b) The patient (or specimen) is placed in a booth, hood or other ventilated enclosure that effectively contains and removes the aerosols, in which case the worker can wear an N95 instead of a PAPR.

Appendix C: RESOURCES

1. N95 Respirators: Several types in use at Kaiser Permanente, including:
 - [3M N95 Model 1860](#)
 - [3M N95 Model 1870](#)
 - [3M N95 Models 8210 and 8110s](#)
 - [Kimberly-Clark Tecnol N95](#)

2. Powered Air Purifying Respirators (PAPRs): Several types in use at Kaiser Permanente, including:
 - 3M AirMate PAPR (particulate contaminants only)
 - 3M Breathe Easy PAPR (particulate and/or chemical contaminants)
 - [MaxAir PAPR](#) (particulate contaminants only)
 - ILC Dover Sentinel XL HP PAPR (particulate contaminants only)

Appendix D: Forms

Alternate Respirator Medical Evaluation Questionnaire (This Appendix is Mandatory if the Employer chooses to use a Respirator Medical Evaluation Questionnaire other than the Questionnaire in Section 5144 Appendix C)

To the PLHCP: Answers to questions in Section 1, and to question 6 in Section 2 do not require a medical examination. Employees must be provided with a confidential means of contacting the health care professional who will review this questionnaire.

To the employee: Can you read and understand this questionnaire (circle one): Yes No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Section 1. The following information must be provided by every employee who has been selected to use any type of respirator (please print).

Today's date: _____

Name: _____ Job Title: _____

Your age (to nearest year): _____ Sex (circle one): Male Female

Height: _____ ft. _____ in. Weight: _____ lbs.

Phone number where you can be reached (include the Area Code): () _____

The best time to phone you at this number: _____

Has your employer told you how to contact the health care professional who will review this questionnaire (circle one) : Yes No

Check the type of respirator you will use (you can check more than one category):

- N, R, or P disposable respirator (filter-mask, non-cartridge type only).
- Other type (ex, half- or full-face piece type, PAPR, supplied-air, SCBA). **(fill in type here)** _____

Have you worn a respirator (circle one): Yes No

If "yes," what type(s): _____

Section 2. Questions 1 through 6 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Have you ever had any of the following conditions?

Allergic reactions that interfere with your breathing:	Yes	No	What did you react to? _____
Claustrophobia (fear of closed-in places)	Yes	No	

2. Do you currently have any of the following symptoms of pulmonary or lung illness?

Shortness of breath when walking fast on level ground or walking up a slight hill or incline:	Yes	No	Coughing that produces phlegm (thick sputum):	Yes	No
Have to stop for breath when walking at your own pace on level ground:	Yes	No	Coughing up blood in the last month:	Yes	No
			Wheezing that interferes with your job:	Yes	No
			Chest pain when you breathe deeply:	Yes	No

Shortness of breath that interferes with your job: Yes No
Any other symptoms that you think
may be related to lung problems: Yes No

3. Do you currently have any of the following cardiovascular or heart symptoms?

Frequent pain or tightness in your chest: Yes No
Pain or tightness in your chest during
physical activity: Yes No
Pain or tightness in your chest that interferes
with your job: Yes No
Any other symptoms that you think may be
related to heart or circulation problems: Yes No

4. Do you currently take medication for any of the following problems?

Breathing or lung problems: Yes No
Heart trouble: Yes No
Nose, throat or sinuses Yes No
Are your problems under control with these
medications? Yes No

5. If you've used a respirator, have you ever had any of the following problems while respirator is being used?

(If you've never used a respirator, check the following space and go to question 6:) _____

Skin allergies or rashes: Yes No
Anxiety: Yes No
General weakness or fatigue: Yes No
Any other problem that interferes with your use of a respirator: Yes No

6. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes No

Employee Signature

Date

PLHCP Signature

Date

Appendix D: Forms

Information for Respirator Fit-Test Screening (Mandatory if employer does not provide annual fit-test)

Respirators are an important means of reducing your exposure to infectious aerosols. Air purifying respirators provide a barrier to prevent health care workers from inhaling *Mycobacterium tuberculosis* and other pathogens. The level of protection a respirator provides is determined by the efficiency of the filter material and how well the face piece fits or seals to your face.

Cal/OSHA regulations require that you be provided with a fit-test at the time of initial fitting, whenever a different size, make, model or style of respirator is used, and whenever you report a change in physical characteristics that may affect fit, such as major dental work, facial surgery or injury, or a change in weight.

Fit tests must also be repeated periodically, because people are not always aware of facial changes that may have affected the fit of the respirator. Generally, Cal/OSHA regulations require that fit-tests be repeated annually. The aerosol transmissible disease regulation permits employers to lengthen this interval to every two years for employees who are not exposed to high hazard procedures, such as bronchoscopes. However, if you believe that you need another fit-test to ensure that the respirator is fitting you correctly, you may request an additional fit-test, and your employer will provide it.

A respirator will not protect you if it does not fit, and if it is not worn properly. In addition to fit-testing, it is important for you to be aware of the size, make, model and style of respirator that fits you, and to understand and practice how to put the respirator on and take it off. It is particularly important to properly place the straps, and in some models, to adjust the straps and adjust the nose piece, so that it forms a snug seal on your face. During your annual training, you will be shown how to use a respirator.

Screening Questions (Answer Yes/No)

Have you had recent major dental work, facial injury or facial surgery since your last fit-test?

Have you had a significant weight gain or loss since your last fit-test?

Do you want to be provided with an additional fit-test for your current respirator?

Name _____

Date _____

Employee ID number _____

Date of fit-test (if provided) _____

Appendix D: Forms

Respirator Medical Evaluation Questionnaire

To the employer: Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

To the employee: Can you read (circle one): Yes No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

Part A. Section 1. The following information must be provided by every employee who has been selected to use any type of respirator (please print).

Today's date: _____

Name: _____ Job Title: _____

Your age (to nearest year): _____ Sex (circle one): Male Female

Height: _____ ft. _____ in. Weight: _____ lbs.

Phone number where you can be reached (include the Area Code): () _____

The best time to phone you at this number:

Has your employer told you how to contact the health care professional who will review this questionnaire :

Yes No

Check the type of respirator you will use (you can check more than one category):

- N, R, or P disposable respirator (filter-mask, non-cartridge type only).
- Other type (ex, half- or full-face piece type, PAPR, supplied-air, SCBA).

Have you worn a respirator (circle one): Yes No

If "yes," what type(s):

Part A. Section 2. Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: Yes No

2. Have you ever had any of the following conditions?

Seizures (fits):	Yes	No	Claustrophobia (fear of closed-in places)	Yes	No
Diabetes (sugar disease):	Yes	No	Trouble smelling odors:	Yes	No
Allergic reactions that interfere with your breathing:	Yes	No			

3. Have you ever had any of the following pulmonary or lung problems?

Asbestosis:	Yes	No	Silicosis:		
Asthma:	Yes	No	Yes	No	
Chronic bronchitis:			Pneumothorax (collapsed lung):	Yes	No
Yes	No		Lung cancer:	Yes	No
Emphysema:	Yes	No	Broken ribs:	Yes	No
Pneumonia:	Yes	No	Any chest injuries or surgeries:	Yes	No
Tuberculosis:	Yes	No	Any other lung problem that you've been told about:	Yes	No

4. Do you currently have any of the following symptoms of pulmonary or lung illness?

Shortness of breath: Yes No
 Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes No
 Shortness of breath when walking with other people at an ordinary pace on level ground: Yes No
 Have to stop for breath when walking at your own pace on level ground: Yes No
 Shortness of breath when washing or dressing yourself: Yes No
 Shortness of breath that interferes with your job: Yes No

Coughing that produces phlegm (thick sputum):

Yes No
 Coughing that wakes you early in the morning: Yes No
 Coughing that occurs mostly when you are lying down: Yes No
 Coughing up blood in the last month: Yes No
 Wheezing: Yes No
 Wheezing that interferes with your job: Yes No
 Chest pain when you breathe deeply: Yes No
 Any other symptoms that you think may be related to lung problems: Yes No

5. Have you ever had any of the following cardiovascular or heart problems?

Heart attack: Yes No
 Stroke: Yes No
 Angina: Yes No
 Heart failure: Yes No
 Swelling in your legs or feet (not caused by walking): Yes No

Heart arrhythmia (heart beating irregularly): Yes No
 High blood pressure: Yes No
 Any other heart problem that you've been told about: Yes No

6. Have you ever had any of the following cardiovascular or heart symptoms?

Frequent pain or tightness in your chest: Yes No
 Pain or tightness in your chest during physical activity: Yes No
 Pain or tightness in your chest that interferes with your job: Yes No
 In the past two years, have you noticed your heart skipping or missing a beat: Yes No

Heartburn or indigestion that is not related to eating: Yes No
 Any other symptoms that you think may be related to heart or circulation problems: Yes No

7. Do you currently take medication for any of the following problems?

Breathing or lung problems: Yes No
 Heart trouble: Yes No

Blood pressure: Yes No
 Seizures (fits): Yes No

8. If you've used a respirator, have you ever had any of the following problems?

(If you've never used a respirator, check the following space and go to question 9:)

Eye irritation: Yes No
 Skin allergies or rashes: Yes No
 Anxiety: Yes No
 Any other problem that interferes with your use of a respirator: Yes No

General weakness or fatigue: Yes No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire:

Yes No

Employee Signature

Date

PLHCP Signature

Date

Appendix D – Forms (NOT IN USE AT THIS TIME)

FIT TESTING ANNUAL QUESTIONS
Employee Health Service



(Imprinted Health Plan Card)

Name:

Date:

Location:

Department:

Type of Respirator:

Size:

These questions are required annually of all health care workers who have been fit tested for respirators for protection against TB.

Please answer the following questions as part of your annual health screen. You will be contacted if follow-up is necessary. (You were last fit tested on / / .)

Yes No In the past year have you had any new unexplained medical condition that might interfere with your use of the respirator? If "Yes", describe: _____

Any one of several conditions may necessitate your being refitted as soon as possible with the respirator you use while caring for TB patients.

1. Yes No Have you had significant weight loss or gain of 20 lbs. or more in the last year? If "Yes", you must be re-fit tested call Employee Health at _____ to arrange another fit testing.

2. Yes No Have you had a change in facial structure in the last year? If "Yes", describe: _____

3. Yes No If you are a male, have you had a change in facial hair in the last year?

Not applicable If "Yes", describe: _____

Signature Date Extension Shift

RETURN TOP PORTION TO EMPLOYEE HEALTH

REVIEWED BY:

Date:

TEAR OFF

KEEP FOR REFERENCE

TEAR OFF

Review the following important procedures regarding the respirator use:
• Inspect your N95 respirator before donning it, making sure the straps and filter medium are intact.



- Proper Donning:
 - > Place first strap under chin flap
 - > Separate the respirator to open it fully
 - > Take top strap and put on crown of head
 - > Take bottom strap past ears to the neck
 - > Pull chin flap under chin to fit
 - > Form the nose piece tightly across the bridge of the nose, and against the face
 - > Adjust the mask to achieve facial seal
- Fit check your respirator each time you put it on yourself. This is done by exaggerated breathing. If air ("blow by") is felt around the edge of the respirator, the face seal is not adequate. Reposition the respirator and fit check again.
- Leave the respiratory precaution area and report to your supervisor if the respirator does not fit snugly, if you have difficulty breathing (or dizziness, weakness, etc.), or if splashed with blood or infectious material that may penetrate the respirator fabric.
- Dispose of the respirator after each use in regular trash.

Appendix D - Form

***SUPPLEMENTAL INFORMATION FOR THE PLHCP: Respirator Use Information for the Medical Evaluation
(Applies to individual employee)***

Employee Information:

Employee Name (print): _____ Employee #: _____



(Job Title if other than employee's supervisor)

APPENDIX E: Aerosol Transmissible Diseases/Pathogens List

Aerosol Transmissible Diseases/Pathogens (Mandatory)

This appendix contains a list of diseases and pathogens which are to be considered aerosol transmissible pathogens or diseases for the purpose of Section 5199. Employers are required to provide the protections required by Section 5199 according to whether the disease or pathogen requires airborne infection isolation or droplet precautions as indicated by the two lists below.

Diseases/Pathogens Requiring Airborne Infection Isolation

Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease,
e.g. Anthrax/*Bacillus anthracis*

Avian influenza/Avian influenza A viruses (strains capable of causing serious disease in humans)

Varicella disease (chickenpox, shingles)/Varicella zoster and Herpes zoster viruses, disseminated disease in any patient. Localized disease in immunocompromised patient until disseminated infection ruled out

Measles (rubeola)/Measles virus

Monkey pox/Monkey pox virus

Novel or unknown pathogens

Severe acute respiratory syndrome (SARS)

Smallpox (variola)/Variola virus

Tuberculosis (TB)/*Mycobacterium tuberculosis* -- Extra pulmonary, draining lesion; Pulmonary or laryngeal disease, confirmed; Pulmonary or laryngeal disease, suspected

Any other disease for which public health guidelines recommend airborne infection isolation

Diseases/Pathogens Requiring Droplet Precautions

Diphtheria pharyngeal

Epiglottitis, due to *Haemophilus influenzae* type b

Haemophilus influenzae Serotype b (Hib) disease/*Haemophilus influenzae* serotype b -- Infants and children

Influenza, human (typical seasonal variations)/influenza viruses

Meningitis

Haemophilus influenzae, type b known or suspected

Neisseria meningitidis (meningococcal) known or suspected

Meningococcal disease sepsis, pneumonia (see also meningitis)

Mumps (infectious parotitis)/Mumps virus

Mycoplasmal pneumonia

Parvovirus B19 infection (erythema infectiosum)

Pertussis (whooping cough)

Pharyngitis in infants and young children/Adenovirus, Orthomyxoviridae, Epstein-Barr virus, Herpes simplex virus,

Pneumonia

Adenovirus

Haemophilus influenzae Serotype b, infants and children

Meningococcal

Mycoplasma, primary atypical

Streptococcus Group A

Pneumonic plague/*Yersinia pestis*

Rubella virus infection (German measles)/Rubella virus

Severe acute respiratory syndrome (SARS)

Streptococcal disease (group A streptococcus)

Skin, wound or burn, Major

Pharyngitis in infants and young children

Pneumonia

Scarlet fever in infants and young children

Serious invasive disease

Viral hemorrhagic fevers due to Lassa, Ebola, Marburg, Crimean-Congo fever viruses (airborne infection isolation and respirator use may be required for aerosol-generating procedures)

Any other disease for which public health guidelines recommend droplet precautions

APPENDIX F: REFERENCES

- Annual Fit Testing Evaluation: NCal: “Guidelines for TB Exposure in Healthcare Settings” or SCal: “Annual Fit Questions”
- Annual TST Screening Forms: NCal: “Tuberculosis Questionnaire” or SCal: “Interval Health Evaluation Questionnaire”
- Cal OSHA Influenza Guidelines, November 5, 2010
- Cal OSHA Aerosol Transmissible Disease Standard, August 2009 (www.dir.ca.gov/oshsb/ATD_txtbdconsider.pdf)
- Cal OSHA TB Standard Enforcement Document April 1997
- CDC Guidelines – TB Prevention, ([Preventing the Transmission of Mycobacterium tuberculosis in Healthcare Settings December 2005](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm): <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5417a1.htm>)
- CDC Guidelines - Testing and Treatment of Latent TB, June 2000: (<http://www.cdc.gov/mmwr/PDF/rr/rr4906.pdf>)
- Example of TB Patient’s Discharge Treatment Plan
- Federal OSHA TB Standard 1997
- Kaiser Educational Modules online: <http://xnet.kp.org/hr/ca/north/docs/hrpeople/learndevelop/safety.htm>
- Kaiser Employee Health Standard Protocols on TB treatment and transmission prevention – online in the KP Clinical Library under “Employee Health”: NCal: <http://clinical-library.ca.kp.org/>; and online on the SCal Occupational Medicine and Employee Health website: <http://EOHSweb/ehs/home.asp>
- KP EH&S TB Guidance Document: <http://kpnet.kp.org/ehs/programs/tb.htm>
- KPLearn: Aerosol Transmissible Diseases Module
- Respirator Medical Evaluation: NCal: “Respirator Medical Evaluation Questionnaire” or SCal: “Physical Status Questionnaire”
- TB Education Form for Staff and Physicians, Kaiser form# 09171-14

APPENDIX G: BIBLIOGRAPHY

MMWR December 2005– CDC “Guidelines for Preventing Transmission of Mycobacterium TB in Health Care Facilities”.

MMWR June 9, 2000 – “TB Testing and Treatment of Latent TB Infections”.

Document Metadata

In Project Mode

Document Name: AEROSOL TRANSMISSIBLE
DISEASES INCLUDES
TUBERCULOSIS.doc

Policy Number: 6220

Original Location: /Kaiser Permanente LAMC/Medical
Center Wide/Infection Prevention and
Control

Created on: 12/21/2017

Published on: 01/22/2018

Last Review on: 01/01/2014

Next Review on: 01/01/2017

Creator: Shanlian, Ara
Other Title (Not on List)

Committee: All

Owner/SME: Budrick, Leslie
Director

Manager: Budrick, Leslie
Director

Author(s): Budrick, Leslie
Director

Reviewer(s): Budrick, Leslie
Director

Publisher: Shanlian, Ara
Other Title (Not on List)