

Stanford University Environmental Health & Safety

Aerosol Transmissible Disease Exposure Control Plan

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1. Introduction to the Stanford Aerosol Transmissible Disease Exposure Control Plan

1.1. Purpose

“Stanford University makes all reasonable efforts to:

- Protect the health and safety of Stanford University faculty, staff, and students.
- Provide safe work practices - academic, research, and administrative - for faculty, staff and students.
- Provide information to faculty, staff, and students about health and safety hazards.
- Identify and correct health and safety hazards and encourage faculty, staff, and students to report hazards.
- Provide information and safeguards for those on campus and in the surrounding community regarding environmental hazards arising from operations at Stanford University.”¹

To fulfill this University policy and to comply with California Code of Regulations, Title 8, Section 5199, Aerosol Transmissible Diseases, and Section 5199.1, Aerosol Transmissible diseases – Zoonotic, this Aerosol Transmissible Diseases Exposure Control Plan (hereafter referred to as “ATD ECP”) has been developed to minimize employee exposure to aerosol transmissible diseases (ATDs) in research, healthcare, as well as in other settings at Stanford University. This document also serves as the Biosafety Plan for laboratories, in conjunction with the Stanford University [Biosafety Manual](#).

Requirements outlined in this document are mandated by the Cal/OSHA Aerosol Transmissible Diseases standard where the word “**shall**” is used and are advisory in nature where the word “**should**” is used. Stanford University requirements are indicated where the word “**must**” is used.

1.2. Scope

This ATD ECP covers all Stanford University personnel with occupational exposure to aerosol transmissible pathogens (ATPs), aerosol transmissible pathogens-laboratory (ATPs-L).

¹ [Health and Safety: Principles, Responsibilities, and Practices \(Research Policy Handbook, October 2020\)](#)

Operations at Stanford University that may have personnel with occupational exposure include:

- Laboratory operations involving ATPs-L, or samples, cultures, or other materials potentially containing aerosol transmissible pathogens
- Research animal facilities and wildlife related field work
- Stanford University Occupational Health Center (SUOHC)
- Stanford University Department of Public Safety (DPS)
- Stanford University Lands, Buildings, and Real Estate (LBRE)
- Other operations, as needed, identified by the Biosafety Officer (BSO)

2. Aerosol Transmissible Disease Biosafety Plan for Laboratories

2.1. Designation of the BSO

Stanford University has designated a BSO charged with implementation and oversight of this Laboratory Biosafety Plan. This BSO is a subject matter expert and maintains the organization mandate to ensure implementation of required biosafety procedures.

The BSO is designated by the Associate Vice Provost and Director of Environmental Health and Safety (EH&S) and identified on the EH&S website. They can be contacted at biosafety-officer@lists.stanford.edu.

The BSO conducts risk assessments in accordance with the methodology included in Section II of the [Biosafety in Microbiological and Biomedical Laboratories \(BMBL\)](#) for each agent and procedure where employees may handle ATPs-L. The BSO determines and documents the safe practices required for each agent and procedure in the Biosafety Plan.

2.2. Job Classifications with Exposure

Stanford University has determined that *some or all* research employees in the following job classifications have occupational exposure when performing certain tasks and procedures:

2.2.1 Job classifications with occupational exposure

- Principal Investigator
- Research scientist/technician
- Postdoctoral research fellow
- Student (undergraduate and graduate researcher)
- Embalmer
- Anatomical gift coordinators
- Clinical research coordinator
- Veterinary service providers
 - Veterinarians
 - Animal Husbandry Staff
 - Necropsy Technicians
- Field Assistants
- Agricultural Extension Agents
- Facilities Personnel

- Waste handlers

2.2.2 Tasks and procedures with occupational exposure

- Centrifugation
- Dissections or necropsies
- Electroporation
- Mixing, blending, grinding, shaking, or sonicating specimens or cultures
- Pipetting, aliquoting
- Pouring, splitting, or decanting liquids
- Splashing infectious material
- Homogenization
- Vortexing
- Transporting specimens/materials (inside/outside of the lab)
- Embalming
- Performing animal infection procedures (nasal inhalation, gavage)
- Caring for infectious animals
- Performing surgery or conducting necropsy of infected tissues
- Animal inoculation or tissue collection
- Cage cleaning and animal handling
- Trapping and handling wild animals
- Examining livestock or farm animals
- Capture, sampling, transportation or disposal of wild birds or other wildlife for research purposes
- Disposal of wildlife remains or waste by employees
- Soil, sediment, or environmental sampling
- Collection of animal tissues or fecal matter
- General maintenance of ABSL2/3 laboratories or animal housing area

2.3. Presence of ATPs-L

Stanford University has determined that ATPs-L are confirmed or reasonably anticipated to be present in laboratory and/or research materials. To mitigate exposure risk, Stanford has established biosafety measures, which must be implemented when handling materials containing ATPs-L. All ATPs-L are listed in Appendix A, and if present in laboratory and/or research materials, are identified in Institutional Biosafety Committee (IBC) protocol(s).

Protocols follow established BMBL biosafety measures or include enhanced or modified measures specific to individual protocols.

2.4. Biosafety Measures

2.4.1 Risk Assessment

Stanford University Biosafety & Biosecurity, under the direction of the BSO, evaluates the need for biosafety measures by conducting a risk assessment for each research protocol. The risk assessments include a biovisit, where biosafety specialists visit the research spaces to assess whether institutional requirements for biosafety are met prior to protocol approval. Additional information on laboratory facility inspections (biovisits) can be found in section 2.4.11. The IBC reviews and approves protocols, which are maintained in Stanford University’s online eProtocol system. Table 1 aligns eProtocol sections with the BMBL five-step risk assessment method.

Table 1: Risk Assessment

Risk Assessment Step	eProtocol Section(s) and Actions
1) Identify the agent hazards	Protocol Info: Methods, Biohazardous Agents, Risk
2) Identify laboratory procedure hazards	Protocol Info: Methods, Safety
3) Determine the appropriate biosafety level and select additional precautions indicated by the risk assessment	Protocol Info: Methods, Biohazardous Agents, Safety, Risk
4) Evaluate the proficiency of staff regarding safe practices and the integrity of safety equipment	Protocol Info: Protocol Personnel Agent Education Acknowledgement
5) Review the risk assessment with a biosafety professional, subject matter expert, and the Institutional Biosafety Committee (IBC)	Protocol Info: PI attestation Annual Biovisits

2.4.2 Incoming Materials Containing ATPs-L

Stanford University policy is all incoming materials containing ATPs-L must be handled as if they contain virulent or wild-type pathogens until Biosafety & Biosecurity and IBC have confirmed deactivation or attenuation. Each IBC protocol identifies relevant ATPs-L specified in Appendix D of the standard and establishes appropriate handling practices. Additionally, the IBC protocol details the procedures and communications steps to determine the status of incoming materials.

2.4.3 Engineering Controls

Engineering controls serve as the primary hazard mitigation strategy for all health and safety risks, including protection against ATP-L exposure. Established institutionalized biosafety measures incorporate biosafety cabinets, sealed centrifuge systems, sharps injury prevention systems, and other engineered safeguards to minimize exposure to laboratory-generated aerosols. Stanford University implements enhanced biocontainment measures for Biosafety Level 3 (BSL-3) operations, including high-efficiency particulate air (HEPA)-filtered negative pressure environments and specialized structural design features to create enhanced barriers. Selection and implementation criteria for engineering controls are specified in the Stanford University Biosafety Manual, with protocol-specific requirements documented in the IBC protocol.

2.4.4 Safe Handling Procedures and Prohibited Practices

All Stanford University personnel must adhere to the following mandatory safety procedures when handling ATP-L materials:

- 1) **Gloves** are worn to protect hands from exposure to hazardous materials.
- 2) Personnel **wash their hands** frequently when handling biohazardous agents, and immediately after removing gloves using soap and water.
- 3) **Leak-resistant, labeled containers** are used for all handling stages (collection, processing, transport, etc.), kept securely closed during transit, and placed within secondary containment when external contamination risks exist.
- 4) **Biological safety cabinets (BSCs)** are checked for proper functioning each time they are used and are certified annually, with the current inspection record visibly posted on the unit.
- 5) **Vacuum lines** are equipped with liquid disinfectant traps and HEPA filters, with filters inspected regularly and promptly replaced as needed.

- 6) **Long hair** is restrained to prevent contact with hands, specimens, containers, or equipment.
- 7) All laboratory procedures are performed using proper techniques that **minimize the creation of splashes and/or aerosols**.
- 8) Work **surfaces are decontaminated** using approved disinfectants after the completion of laboratory procedures and immediately following any spill or potential contamination with potentially infectious material.
- 9) **Eye protection** is used while manipulating materials.

The following practices are prohibited when handling ATPs-L materials, as they may increase employee exposure to infectious or potentially infectious laboratory aerosols.

- 1) **Sniffing or smelling** of cultures is strictly prohibited.
- 2) **Mouth pipetting** or mouth suctioning is strictly prohibited.
- 3) **Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses**, or object-to-mouth contact (pen, pencil, pipette, etc.) are prohibited in work areas.
- 4) **Food and drink are not stored** in refrigerators, freezers, shelves, cabinets, bench tops, ovens, or microwaves where lab materials are present.
- 5) **Used needles and other sharps** are not sheared, bent, broken, recapped, or re-sheathed by hand. Used needles are not removed from disposable syringes. Contaminated sharps must be placed directly into a labeled, puncture-resistant sharps container.
- 6) **Animals and plants** not associated with the work being performed are not permitted in the laboratory.

2.4.5 Decontamination and Disinfection Procedures

To minimize ATD exposure risks from contaminated surfaces, all laboratory personnel must decontaminate work surfaces and equipment using Environmental Protection Agency (EPA)-registered disinfectants specified in both the Biosafety Manual and individual IBC protocol Methods sections. Required disinfection must be performed: (1) after completing experimental procedures, (2) at the conclusion of each work shift, and (3) immediately following any spill or unplanned release of biohazardous materials.

2.4.6 Personal Protective Equipment

Stanford University requires specific personal protective equipment (PPE) when working with ATPs-L to minimize exposure to infectious or potentially infectious aerosols. PPE requirements are documented through both the institutional PPE Assessment process and approved IBC protocols. PPE requirements include:

- 1) Lab coats and gloves, which must be removed before exiting the lab.
- 2) Full body protection, such as closed toe shoes and long pants to prevent exposure.
- 3) Eye protection to prevent exposure through eyes or mucous membranes.

When working in the A(Animal)/BSL-3, additional PPE may be required, such as PAPR or CAPR, Tyvek suits, booties, hair nets, and secondary gloves.

2.4.6.1 Respiratory Protection Requirement

When risk assessments indicate need, laboratories must implement respiratory protection in compliance with Stanford's Respiratory Protection Program, in accordance with Title 8 CCR §§5144/5199. Stanford University provides required respiratory protection measures including: (1) medical clearance evaluations, (2) respirator fit testing, and (3) EHS-5010 training. Complete program requirements are detailed in Stanford University's [Respiratory Protection Program](#) and Section 6.

2.4.7 Emergency Procedures for Releases

To minimize accidents, training and ongoing communication with employees is maintained through Stanford University's Environmental Health & Safety (EH&S) located at 484 Oak Road, Stanford, CA 94305. While uncontrolled releases (e.g., cell culture spills) may occur inside or outside laboratory facilities, emergency procedures for such releases are outlined in the [Biosafety Manual](#).

Researchers must immediately contact EH&S at (650) 725-9999 to report incidents and request assistance.

EH&S reports release incidents to the appropriate local health officers, outside agencies, and regulators as required by applicable regulations, including those of Santa Clara County and the City of Palo Alto.

The designated Institutional Contact for Local Health Officer notification is:

Biosafety Officer

Biosafety-officer@lists.stanford.edu

Local Health Officer Contact:

Santa Clara County Public Health Department

(408) 792-3798

phinternet@phd.sccgov.org

2.4.8 Communication of Hazards and Training

Occupational exposure training for ATP-L is provided to all employees in designated job categories (as specified in Section 2.2.1). Initial training occurs when employees are first assigned to relevant tasks (as specified in Section 2.2.2), with annual refresher training provided within 12 months of the previous session.

The primary training delivery method is through the Stanford Training and Registration System (STARS) online platform, supplemented by in-person sessions available upon request for specific job categories.

All requisite training topics are covered in the online format, with interactive components monitored by subject matter experts who respond to questions within 24 hours. These experts possess comprehensive knowledge of both the training content and this Biosafety Plan.

For training inquiries, contact:

Biosafety Officer

Biosafety-officer@lists.stanford.edu

Training curricula includes:

- An accessible copy of the regulatory text of this standard and an explanation of its contents.
- A general explanation of ATDs including the signs and symptoms of ATDs that require further medical evaluation.
- An explanation of the modes of transmission of ATPs-L and applicable source control procedures.
- An explanation of the institutional ATD Exposure Control Plan, how the employee can obtain a copy of the written plan, and how they can provide input as to its effectiveness.

- An explanation of the appropriate methods for recognizing tasks and other activities that may expose the employee to ATPs or ATPs-L.
- An explanation of the use and limitations of methods that prevent or reduce exposure to ATPs or ATPs-L including appropriate engineering and work practice controls, decontamination and disinfection procedures, and personal and respiratory protective equipment.
- An explanation of the basis for selection of PPE, its uses and limitations, and the types, proper use, location, removal, handling, cleaning, decontamination, and disposal of the items of PPE employees use.
- A description of the employer's Tuberculosis (TB) surveillance procedures, including the information that people who are immune compromised may have a false negative test for Latent Tuberculosis Infection (LTBI).
- Training that meets the requirements of section 5144(k) of these orders for employees whose assignment includes the use of a respirator.
- Information on the vaccines made available by the employer, including information on their efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination is offered free of charge.
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident, the medical follow-up that is made available, and post-exposure evaluation.
- Information on the employer's surge plan as it pertains to the duties that employees perform. As applicable, this training covers the plan for surge procedures for handling specimens, including specimens from people who may have been contaminated as the result of a release of a biological agent, how to access supplies needed for the response including personal protective equipment and respirators, decontamination facilities and procedures, and how to coordinate with emergency response personnel from other agencies.

2.4.9 Obtaining Active Involvement in Plan Review

The annual Biosafety Plan review process actively engages employees at all levels, not just management and supervisors, through participation opportunities that move beyond passive forms. Two primary channels facilitate this engagement: (1) inclusion of the exposure control plan review announcement with document links in the regularly scheduled Lab Safety Coordinator (LSC) newsletter, actively soliciting employee feedback; and (2) formal verbal announcements during corresponding LSC meetings to reinforce participation. These dual

communication methods ensure comprehensive employee involvement while gathering work area-specific insights to strengthen plan effectiveness.

2.4.10 Facility Design Plan Review

The BSO, or their appointee, reviews the plans for any new facility design and construction projects which might affect structural control measures for ATPs-L. This evaluation identifies potential conflicts with existing containment protocols before construction is initiated. A review is also performed when laboratory groups move into new facilities. To ensure alignment with institutional practices, the BSO reviews facility plans, and a biosafety specialist serves on the EH&S Plans Review Committee, which meets weekly to discuss the inclusion of biosafety mitigation measures in facility design.

2.4.11 Laboratory Facility Inspections (Biovisits)

Regular biovisits must be performed to identify and correct hazards or deviations from institutionally accepted practices in a timely manner. These annual inspections are conducted by biosafety specialists according to the IBC calendar cycle (October-September) and include both biosafety procedure audits and physical inspections of facilities and equipment. During biovisits, specialists communicate findings to the laboratory and document all identified hazards and corresponding corrective actions through the annual biovisit form, which is uploaded directly to eProtocol. All findings are addressed in accordance with the Injury and Illness Prevention Program (IIPP), with imminent hazards corrected immediately when feasible to ensure prompt resolution of critical safety concerns.

3. Aerosol Transmissible Disease (ATD) Biosafety Plan for Zoonotic Operations

3.1. Section Scope and Application

3.1.1. Scope

This section applies to work in the following facilities, service categories or operations:

1. Operations involving the management, capture, sampling, transportation or disposal of wild birds or other wildlife
2. Farms producing animals or animal products, including the transport of animals and untreated animal products, byproducts, or wastes to or from farms
3. Slaughterhouses and initial processing facilities for untreated animal products, byproducts, or wastes
4. Veterinary, animal inspection, and other animal health operations
5. Importers of live animals and untreated animal products
6. Zoos, animal parks, pet stores and other operations in which animals are displayed, transported, or housed
7. Laboratory operations involving samples, cultures, or other materials potentially containing zoonotic aerosol transmissible pathogens (zoonotic ATPs)
8. Zoonotic ATP incident response operations as defined below

3.1.2. Applicability

Based on specific work operations, the following application of this section applies:

1. Basic requirements (Section 3.2.1.) apply to all work operations
2. Hazardous waste and Emergency Response Operations shall comply with [California Code of Regulations, Title 8, Section 5192, Hazardous Waste Operations and Emergency Response](#)
3. Special practices for exposure to potentially infectious wildlife, as detailed in Section 3.4. apply to work operations involving:
 - a. Capturing or obtaining samples from wildlife for the purpose of determining whether they are infected with zoonotic ATPs, or
 - b. Collecting and disposing of wildlife under an alert regarding potential zoonotic ATP infection that has been issued by the Centers for Disease Control (CDC), California Department of Food and Agriculture (CDFA), California Department of Fish and Game (CDFA, now called California Department of Fish and Wildlife

or CDFW, California Department of Public Health (CDPH), United States Department of Agriculture (USDA) or United States Department of the Interior (USDOI, or any of its agencies including the United States Fish and Wildlife Service and the United States Geological Survey), where the alert is applicable to the operations based on the specific conditions of the alert (e.g., geographic area, species, type of animal)

4. Special practices for establishments under USDA or CDFA quarantine orders or movement restrictions, as detailed in Section 3.5., apply to work operations involving:
 - a. Establishments or operations for which the USDA or CDFA have issued quarantine orders, movement restrictions, or other infection control orders due to an increased risk of zoonotic ATP infection
5. Special practices for response operations that involve animals infected with zoonotic ATPs, as detailed in Section 3.6. apply to work operations involving:
 - a. Veterinary facilities where the risk assessment determines that ABSL-3 or above practices are required
 - b. Handling, culling, transporting, killing, eradicating, or disposing of animals infected with zoonotic ATPs (based on applicable definitions), or
 - c. Cleaning or disinfecting areas used, or previously used, to contain animals or their wastes
6. Laboratory operations involving samples, cultures, or other materials potentially containing zoonotic ATPs shall comply with the overall ATD ECP, unless they meet other areas of applicability detailed here.
7. Vertebrate animal research facilities shall perform and document a risk assessment and adopt control measures consistent with the BMBL. These facilities shall comply with Recordkeeping requirements in Section 7 and the overall ATD ECP, unless they meet other areas of applicability detailed here.

3.2. Requirements

3.2.1. Basic Requirements

In compliance with the university's Injury / Illness Prevention Plan (IIPP), such operations shall establish, implement, and maintain comprehensive zoonotic ATP exposure prevention procedures through IBC and Institutional Animal Care and Use Committee (IACUC) protocol submission, or specific Biosafety Plans. These procedures shall include sanitation standards, occupational injury and illness investigation procedures, PPE requirements, training, and

where applicable, biosecurity measures. Training shall cover all exposure control procedures. These basic requirements are detailed in Section 3.3.

3.2.2. Requirements for Exposure to Potentially Infectious Wildlife

For work involving capturing or obtaining samples of wildlife to detect the presence of infection with zoonotic ATPs, or the collection and disposing of wildlife for which an alert has been issued regarding zoonotic ATP infection, biosafety plans must include all the requirements under Section 3.2.1., as well as written procedures to control the risk of disease transmission to employees and respirator use in certain circumstances, as detailed in Section 3.4, and compliance with recordkeeping requirements in Section 7.

3.2.3. Requirements for Establishments Under USDA or CDFA Quarantine Orders or Movement Restrictions

For work involving a zoonotic ATP and placed under quarantine orders, movement restrictions or other infection control orders from the USDA or CDFA, a biosafety plan must include written procedures that establish and maintain controls for zoonotic ATD and include requirements under Section 3.2.1.

Additionally, plans must address restricted access and protection for employees working in the restricted area, as detailed in Section 3.5, and compliance with recordkeeping requirements in Section 7.

3.2.4. Requirements for Response Operations that Involve Animals Infected with Zoonotic ATPs

For all work that involves response operations involving animals infected with zoonotic ATPs, including (a) handling, culling, transporting, killing, eradicating, or disposing of animals infected with zoonotic ATPs, or (b) cleaning or disinfecting areas used, or previously used, to contain such animals or their wastes, a biosafety plan must be established and maintained. It must include written procedures addressing supervision, PPE and zoonotic disease control procedures, as detailed in Section 3.6, as well as compliance with recordkeeping requirements in Section 7.

3.3. Basic Controls and Corrective Measures for Zoonotic ATD

The following are in addition to the Biosafety Measures outlined in Section 2.4.

3.3.1. Safe Work Practices

All safe handling procedures and prohibited practices will be consistent with current BMBL guidelines and items outlined in Section 2.4. Work procedures shall be conducted in a manner that minimizes production of aerosols (e.g., dampening surfaces before cleaning dust or waste). The Stanford University Biosafety Manual provides detailed guidance on practices to minimize aerosol production, and specific processes are addressed in IBC protocols.

University policy recommends that all faculty, staff, visiting scholars, and students who work directly with vertebrate animals, unfixed animal tissues or body fluids, or in animal housing areas should participate in the Laboratory Animal Occupational Health Program (LAOHP). As outlined in the LAOHP, participation is required, not recommended, for certain work based on risk assessment and categorization.

3.3.2. Engineering Controls

At Stanford University, employees must use appropriate engineering controls for all work involving infectious diseases or potentially infectious animals. Required controls include biosafety cabinets and filtered animal holding rooms for high-containment operations. The Stanford University Biosafety Manual provides detailed guidance on selection and use of such controls, with additional specifications included in approved IBC protocols.

3.3.3. Respiratory Protection

Respiratory protection shall comply with the Stanford University Respiratory Protection Program, outlined in Section 6. Employees must consult with EH&S to determine if respiratory protection is required for operations in restricted areas. Respiratory protection is required unless a qualified expert can demonstrate through objective evidence that engineering and work practice controls have eliminated the risk of disease transmission.

3.3.4. Personal Protective Equipment and Clothing

Research animal facilities shall conduct PPE hazard assessments and provide equipment consistent with current BMBL guidelines and Stanford's PPE Policy. All PPE shall ensure that hazardous substances, contaminated fluids, and aerosols do not penetrate through mucous membranes or skin. The equipment and clothing shall fit comfortably without restricting necessary movement and shall be compatible with required decontamination and disposal

methods. Eye protection is required if there is the potential for splashes, sprays, and respiratory droplets.

3.3.5. Sanitation and Biosecurity

Clean, sanitary workplaces must be maintained, and the sanitary procedures shall be included in the written plan. This includes ensuring that employees have access to sanitation facilities, such as handwashing facilities or showers, as appropriate.

Equipment, protective clothing, respirators and surfaces that may have become contaminated must undergo proper decontamination or be discarded appropriately. Disinfectants must be registered with the EPA and the manufacturer's direction must be followed.

All procedures for treatment and disposal of animal waste and contaminated PPE and clothing shall minimize employee exposure to zoonotic hazards and shall comply with applicable federal and state EPA standards.

If movement of animals, animal carcasses, or waste may introduce pathogens into areas where animals are housed, then additional biosecurity procedures must be detailed in the relevant Biosafety Plan, IBC, or IACUC.

3.3.6. Communication

Communication regarding zoonotic ATDs must be provided to relevant personnel. Outbreak communication plans should be considered ahead of time to allow rapid communication.

3.3.7. Illness Investigations

Illness investigation shall be done according to Stanford's IIPP and Section 2.4.

3.3.8. Training

Employees shall receive training upon initial assignment and whenever site conditions substantially change, or new hazards are introduced. Training shall include each of the following as they apply to the work operation:

- Potential zoonotic ATD hazards that employees may be exposed to
- The job tasks that may expose them to these hazards

- How to recognize signs of animal disease, such as an increase in the number of animal deaths and changes in their eating patterns
- The safety equipment that Stanford provides to protect employees from the zoonotic ATD hazards, including control measures, PPE, and respiratory protective equipment
- Work practices that employees can use to protect themselves, such as frequent handwashing, decontamination procedures, and other sanitation procedures
- Stanford's occupational illness and injury investigation procedures
- Stanford's biosecurity procedures, if applicable
- Stanford's medical services program, including surveillance, vaccinations, prophylaxis, and heat illness prevention, if applicable.

3.4. Special Practices for Exposure to Potentially Infectious Wildlife

Biosafety plans must include written procedures to control the risk of disease transmission to employees. These procedures must be available on-site whenever employees are present. These written procedures shall include general requirements in the Stanford ATD ECP and the below requirements.

Procedures shall also include the use of a respirator at least as effective as an N95 filtering facepiece respirator whenever there is:

1. An increased potential of exposure to infectious aerosols, such as when handling animals in an enclosed or indoor area,
2. Responding to a mortality event involving a significant number of animals, or
3. There are animal-related dusts in the environment that are reasonably likely to be an aerosol infection hazard to employees.

Respiratory protection shall comply with the Stanford University Respiratory Protection Program, outlined in Section 6.

3.5. Special Practices for Establishments Under USDA or CDFA Quarantine Orders or Movement Restrictions

Biosafety plans must include written procedures to control the risk of disease transmission to employees. These procedures must be available on-site whenever employees are present. These written procedures shall include general requirements in the Stanford ATD ECP and the below requirements.

Procedures should identify restricted areas with controlled access where exposure to potentially infected animals or their waste could occur. Site control measures must include designating a restricted area where exposure to potentially infected animals or their waste could occur. Access to these areas must be controlled and appropriate signage must be posted.

Protections for employees working in the restricted area must include:

- A supervisor who is knowledgeable in Stanford's zoonotic disease control procedures
- Protective clothing and equipment
 - Protective clothing, head coverings, gloves, foot covers
 - Eye, nose, and mouth protection where the disease may be transmitted by contact with eyes or mucous membranes
 - Disposal or laundering of the PPE and equipment
- Respiratory protection in enclosed areas where aerosols from potentially infectious animals or animal wastes are present
- Access to sanitary facilities, changing rooms, shower rooms, and drinking water
- Access to medical services, including surveillance, vaccinations, and prophylaxis recommended by the CDC, CDPH, or local health officer
- Training
- Record of persons who enter the restricted area

3.6. Special Practices for Response Operations that Involve Animals Infected with Zoonotic ATPs

Biosafety plans must include written procedures to control the risk of disease transmission to employees. These procedures must be available on-site whenever employees are present. These written procedures shall include general requirements in the Stanford ATD ECP and the below requirements.

Protections for employees working with animals infected with zoonotic ATPs must include:

- Supervision in restricted areas by a knowledgeable person who
 - is authorized to enforce the employer's zoonotic disease control procedures and
 - will ensure all persons who enter the restricted area have been trained and their entry recorded

- Personal protective equipment (PPE) and clothing meeting the requirements of with California Code of Regulations, Title 8, Section 3380 through 3387
- Eye protection
- Respiratory protection during operations in the restricted area in accordance with California Code of Regulations, Title 8, Section 5144, that provides:
 - Protection against infectious disease hazards and hazardous substances
 - Elastomeric or PAPR in enclosed areas
- Written zoonotic disease control procedures:
 - Detailed work plan:
 - Assessment of risks to employees, including the following types of hazards:
 - Biological
 - Chemical
 - Physical
 - Safety
 - Site control measures including designation of a restricted area consisting of:
 - Contaminated zones
 - Contaminant reduction zones
 - List of all jobs, tasks, or procedures in which employees may have occupational exposure
 - The measures the employer will use to control employee exposure:
 - Engineering and work practice controls
 - Exposure monitoring
 - Procedures for the safe handling of hazardous substances, including those used for disinfection and decontamination
 - Procedures for the application of toxic or asphyxiant gases, if used
 - Respiratory protection
 - Personal protective equipment and protective clothing.
 - Decontamination procedures
 - Disposal of animal waste and contaminated PPE
 - Medical services
 - Training
 - Recordkeeping

- Ready or frequent access to drinking water and sanitation facilities, including appropriate decontamination methods for employees who need to access them
- Heat illness prevention
- Additional procedures for applying toxic or asphyxiant gases or foams:
 - Ensure that no person is in the restricted area prior to application of asphyxiant gas unless they are protected by all the measures required in with California Code of Regulations, Title 8, Section 5144(g) for IDLH (immediately dangerous to life or health) atmospheres:
 - Physical or visual search of the area
 - Audible or visual warning that is distinctive and recognizable by all people in the area
 - An accounting for all personnel known to be in the restricted zone
 - Post signs at all possible entry points to the restricted area, visible from 12 feet:
 - The words “Danger — Do Not Enter”
 - The poison symbol
 - Name of the gas being applied
 - Ventilate the area prior to reentry of employees
 - Monitor the air in the restricted area to ensure the following before allowing required signs to be removed:
 - Oxygen is not deficient
 - IDLH conditions do not exist
 - The levels of the applied gases are not above either the ceiling or short-term exposure limits set in California Code of Regulations, Title 8, Section 5155
 - Continuously monitor for oxygen deficiency and toxic gases in the areas where employees are working adjacent to the area where the gases are applied and where a hazardous atmosphere may exist
 - Confined space entry procedures in accordance with California Code of Regulations, Title 8, Section 5157, if employees enter confined spaces.
 - Fumigation procedures in accordance with California Code of Regulations, Title 8, Sections 5221 through 5223
- Appropriate treatment and disposal of animal waste and contaminated PPE and clothing
- Decontamination of employees when they leave the restricted area
- Medical Services:

- Initial medical evaluation prior to first entry into a restricted area
- Surveillance for signs and symptoms of zoonotic disease, and if needed, follow-up evaluation by a PLHCP
- Surveillance for overexposures to hazardous substances, as appropriate.
- Vaccinations or prophylaxis as recommended by the CDC, CDPH, local health officer, or PLHCP
- Follow-up medical evaluations as recommended by the CDC, CDPH, local health officer, or PLHCP
- Written report from the PLHCP containing the following information:
 - Respirator medical evaluations —the information required in California Code of Regulations, Title 8, Section 5144(e)(6)(A)
 - Vaccination or prophylaxis —whether the employee has been provided with vaccine and/or prophylaxis, and whether the employee is authorized to enter the restricted area
 - Referrals and follow-up medical evaluations — the fact that the employee has received the evaluation, whether additional evaluation is required, and whether the employee is authorized to work in the restricted area
- Training

4. Stanford University Occupational Health Center, Department of Public Safety, and Land, Buildings, and Real Estate

4.1. Basic Requirements

Stanford University Occupational Health Center (SUOHC), Department of Public Safety (DPS), and Land, Buildings, and Real Estate (LBRE) are considered “referring employers” within the scope and application of Title 8 CCR 5199.

For SUOHC, operations meet all of the following conditions:

- Screen individuals for airborne infectious diseases (AirID).
- Refer any person identified as a case or suspected case of AirID.
- Do not intend to provide further medical services to AirID cases and suspected cases beyond first aid, initial treatment, or screening and referral.
- Do not provide transport, housing, or airborne infection isolation to any person identified as an AirID case or suspected case, unless the transport provided is only nonmedical transport in the course of a referral.

For DPS, operations covered include the following:

- Police services provided during transport or detention of individuals reasonably anticipated to be cases or suspected cases of ATDs.
- Police services provided in conjunction with health care or public health operations.

For LBRE, operations covered include the following:

- Maintenance renovation, service, or repair operations involving air handling systems or equipment or building areas that may reasonably be anticipated to be contaminated with ATPs

4.2. ATD Administrator

SUOHC, DPS, and LBRE shall each designate an ATD Administrator responsible for the establishment, implementation, and maintenance of written infection control procedures to control the risk of transmission of ATDs for their operations. This person shall have both the authority to implement the procedures and the knowledge of infection control principles as they apply specifically to the facility. When the administrator is not on site, there shall be a designated person with full authority to act on his or her behalf.

The ATD Administrator for SUOHC is:
Stanford University Occupational Health Center Medical Director
stanfordohc@stanford.edu

The ATD Administrator for DPS is:
DPS Designee, as appointed by the Patrol Captain of the Department of Public Safety
(650) 723-9633

The ATD Administrator for LBRE is:
LBRE Safety Director
LBREgeneral-info@stanford.edu

4.3. Infection Control Procedures

Written Infection Control Procedures shall be available at the worksite and shall include the following:

- Job categories in which employees have occupational exposure to ATDs.
- Procedures for cleaning and disinfection of work areas, vehicles, and equipment that may become contaminated with ATPs and pose an infection risk to employees.
 - o [Guidance on effective disinfectants is available on the EPA webpage](#)
 - o [Guidance on cleaning and disinfection in healthcare facilities](#)

4.4. Source Control Procedures

Source control procedures minimize the spread of potentially infectious airborne particles and droplets from symptomatic individuals. These procedures shall include the following:

- Posting signs near entrances instructing patients to inform healthcare staff if they have symptoms of respiratory infections
- Posting information about respiratory hygiene/cough etiquette and making surgical or procedure masks and tissues available to symptomatic patients
(<https://www.cdc.gov/infection-control/hcp/viral-respiratory-prevention/index.html>)
(DPS shall incorporate these recommendations to the extent reasonably practicable.)
- Making adequate handwashing facilities with soap or alcohol-based hand sanitizers available to patients and people accompanying them
- Placing symptomatic persons in a separate room or area, preferably with a separate ventilation system

- Include the method of informing persons with whom employees will have contact of the source control methods
- Surgical masks (i.e., with ties) or procedure masks (i.e., with ear loops) should be used for source control, as they greatly decrease the chance of infectious material escaping the mask; N95 respirators with exhalation valves must not be used for source control, as these do not stop the release of particles and droplets

4.5. Screening and Referral Procedures

Referrals/transfers shall occur within 5 hours of the identification of the case or suspected case, unless the initial encounter occurs between 3:30 p.m. and 7:00 a.m. of the next day, in which case the referral/transfer must occur prior to 11:00 AM. However, if SUOHC contacts the local health officer and determines that no facility is available to provide airborne infection isolation, then the patient may remain at the employer's facility. SUOHC shall continue to contact the local health officer and other facilities every 24 hours to attempt the transfer. The patient is not required to be transferred if the treating physician determines that the transfer would be detrimental to the patient's condition. The patient's condition shall be assessed every 24 hours to determine if they can be safely transferred, and SUOHC shall document the determination. If a transfer is determined to be safe, then it must occur within the timeframes described above.

Sample criteria for screening that may be adopted in nonmedical settings can be found at <http://www.dir.ca.gov/Title8/5199f.html>.

Patients exhibiting flu symptoms including coughing, other respiratory symptoms, fever, sweating, chills, muscle aches, weakness, and malaise during flu season do not require referral and transfer.

Procedures to communicate with employees, other employers, and the local health officer regarding the suspected or diagnosed infectious disease status of referred patients. These shall include procedures to receive information from the facility to which patients were referred and to provide necessary infection control information to employees who were exposed to the referred person.

4.6. Procedures to reduce the risk of transmission of ATD

These are procedures to reduce the risk of transmission of ATD, to the extent feasible, during the period the person requiring referral is in the facility or is in contact with employees.

These procedures include source control measures and, to the extent feasible, placement of the person requiring referral in a separate room away from other patients, preferably with a separate ventilation or filtration system. The ventilation system used for this purpose is not required to include HEPA filtration. However, if the patient is not compliant with source control measures, then employees shall wear N95 respirators when entering the room or area in which the person requiring referral is located. The use of respirators shall be in accordance with the Stanford University Respiratory Protection Program.

4.6.1 Exceptions

Law enforcement personnel who transport a person requiring referral in a vehicle need not use respiratory protection if all of the following conditions are met:

- A solid partition separates the passenger area from the area where employees are located.
- Written procedures are implemented that specify the conditions of operation, including the operation of windows and fans.
- The airflow is tested (e.g., by the use of smoke tubes) in a representative vehicle (of the same model, year of manufacture, and partition design) under the specified conditions of operation and it is found that there is no detectable airflow from the passenger compartment to the employee area.
- A record of the test results is maintained.
- The person performing the test is knowledgeable about the assessment of ventilation systems.
- EH&S shall document the assessment in writing, describing the results and conclusion.

4.7. Employee Training

Training shall be provided to all employees of the “referring employers” so that they may recognize and refer out individuals who potentially have an AirID in a timely manner and take necessary precautions.

The training shall be provided by a knowledgeable person at the time of initial assignment of employees to tasks where occupational exposure to ATD cases could occur and at least annually. Additional training shall be provided when there are changes in the workplace or when there are changes in procedures that could affect worker exposure to ATPs. Training shall include the following:

- A general explanation of ATDs, including the signs and symptoms that require further medical evaluation.
- Screening methods and criteria for persons who require referral.
- Source control measures and how these measures will be communicated to persons the employees contact.
- Procedures for making referrals.
- Procedures for temporary risk reduction measures prior to transfer.
- Respiratory protection training, when respiratory protection is used.
- Procedures for the medical services provided by this ATD ECP, the methods of reporting exposure incidents, and procedures for providing employees with post-exposure evaluation.
- Information on vaccines available under this ATD ECP, including the seasonal influenza vaccine. For each vaccine, this information shall include the efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- How employees can access this ATD ECP and written infection control procedures and how employees can participate in reviewing the effectiveness of the written infection control procedures.
- An opportunity for interactive questions and answers with a person who is knowledgeable in the subject matter as it relates to the workplace that the training addresses and who is also knowledgeable in the written infection control procedures. Training not given in person shall provide for interactive questions to be answered within 24 hours by a knowledgeable person.

5. Medical Services

Medical services are provided by SUOHC at no cost to employees with exposure to ATPs and ATPs-L to prevent and treat lab-acquired infections (LAIs), and also after exposure incidents. Medical services are provided by SUOHC at 484 Oak Road, Stanford CA 94305. SUOHC will refer personnel to other facilities, as appropriate.

5.1. Vaccinations

SUOHC is committed to ensuring the health and safety of Stanford's employees, and have established the following procedures to facilitate access to recommended vaccinations and monitor their provision effectively in alignment with California Code of Regulations, Title 8, [Section 5199](#).

5.1.1. Vaccination Program

SUOHC offers the recommended vaccinations to all employees who may be exposed to hazards requiring protection. These vaccinations include, but are not limited to, the following:

- Influenza vaccine
- Hepatitis B vaccine
- MMR vaccine
- Varicella vaccine
- Tetanus booster, for those working in specific environments

Vaccinations are available to occupationally exposed employees after providing the required training (see Section 5.1.6) within 10 working days of initial assignment to duties where they have occupational exposure.

SUOHC offers the vaccination unless any of the following three conditions exists:

- 1) The employee has previously received the recommended vaccination and is not due to receive it again.
- 2) A physician/licensed health care professional (PLHCP) has determined that the employee is immune in accordance with applicable public health guidelines.
- 3) The vaccine is contraindicated for medical reasons.

Additional vaccine doses are available to employees within 120 days of the issuance of any new applicable public health guidelines recommending the additional dose.

SUOHC does not require employees to participate in a prescreening serology program prior to receiving a vaccine, unless applicable public health guidelines recommend this prescreening prior to administration of the vaccine

5.1.2. Documentation of Vaccination Status

SUOHC maintains individual medical records for employees who receive vaccinations through SUOHC. This includes:

- Date of vaccination
- Type of vaccine administered
- Medical provider details (if applicable)
- Any related follow-up procedures required

5.1.3. Follow-up Procedures

Employees who receive vaccinations are informed about necessary follow-up steps and are monitored for any side effects. Employees have access to resources for reporting adverse reactions promptly.

5.1.4. Lack of Availability Documentation

In cases where a recommended vaccine is not available, procedures include:

- Documenting the specific vaccine that was unavailable.
- Noting the reasons for the lack of availability (e.g., supply chain issues, manufacturer shortages).
- Keeping a record that includes the date of inquiry and responses from suppliers. This includes checking on the availability of the vaccine at least every 60 calendar days and informing the employee(s) when the vaccine becomes available.

5.1.5. Communication

SUOHC communicates vaccination opportunities and other health-related information to employees regularly. This includes a clear process for employees to inquire about vaccinations and report any concerns.

5.1.6. Information and Training

If requested, SUOHC may provide training about vaccine benefits, the importance of vaccinations for workplace safety, and instructions for how employees can access vaccinations.

5.1.7. Review and Update

Vaccination procedures are continuously reviewed and updated as needed to ensure compliance with any changes in regulations or recommendations from public health authorities.

Employees have the option to decline receiving any of the recommended vaccinations. If an employee declines a vaccination, they must sign the appropriate declination form. This form is kept in their employee file.

If an employee declines any vaccination, they must sign a declination containing the appropriate wording included in Appendix C, completed with the name of appropriate disease or pathogen.

5.2. Latent Tuberculosis (TB) Infection Assessment

Laboratory researchers who work with *Mycobacterium tuberculosis* are enrolled in the TB surveillance program. TB assessment tests are offered initially and every six months thereafter, until the completion of the work assignment.

If applicable public health guidelines or the local health officer recommends more frequent testing, then Stanford University complies with the recommendation.

Employees with a baseline positive TB test may have a chest x-ray taken within one year (or sooner) of hire. They may also undergo a repeat blood test.

Researchers who experience work-related TB conversion are evaluated by an OHC physician, in consultation with the biosafety team, and provided latent TB infection treatment. In the event of a work-related TB conversion, SUOHC also does the following:

- 1) Provide the PLHCP with a copy of title 8 CCR 5199 and the employee's TB test records. If Stanford has determined the source of the infection, any available diagnostic test results are provided, including drug susceptibility patterns relating to the source patient.

- 2) The PLHCP, with the employee's consent, performs any necessary diagnostic tests and informs the employee about appropriate treatment options.
- 3) The PLHCP determines if the employee is a TB case or suspected case, and does all of the following, if the employee is a case or suspected case:
 - Inform the employee and the local health officer in accordance with Title 17 of the California Code of Regulations.
 - Consult with the local health officer and inform Stanford of any infection control recommendations related to the employee's activity in the workplace.
 - Make a recommendation to Stanford regarding precautionary removal due to suspect active disease, in accordance with subsection (h)(8) of 8CCR 5199, and provide Stanford a written opinion in accordance with subsection (h)(9).

The person responsible for implementing the above TB screening procedures is:

Stanford University Occupational Health Center Medical Director
stanfordohc@stanford.edu

The person who receives information from the PLHCP regarding infection control recommendations for and precautionary removal of employees who are TB cases or suspected cases is:

Biosafety Officer
Biosafety-officer@lists.stanford.edu

This person also communicates the recommendations to managers or staff members, if applicable.

In the event of a TB conversion, SUOHC records the case on the Cal/OSHA Form 300 Log of Work-Related Injuries and Illnesses by placing a check in the “respiratory condition” column and entering “privacy case” in the space normally used for the employee’s name. SUOHC and EH&S also investigate the circumstances of the conversion and correct any deficiencies in the procedures, engineering controls, or PPE that were involved. The investigation is documented through a combination of SU-17 incident reporting and medical records (Section 5.4).

5.3. Exposure Incidents and Post-Exposure Evaluation

An “exposure incident (*laboratory*)” is defined as a significant exposure to an aerosol containing an ATP-L, without the benefit of applicable exposure control measures. A

“significant exposure” is an exposure to a source of 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 physician or other licensed health care provider (PLHCP).

In the event of an exposure incident (*laboratory*), medical services are offered to employees who were exposed to the ATPs-L and Stanford conducts an incident investigation using procedures described in this section of this Biosafety Plan.

In order to notify employees who were exposed to the ATP-L, Stanford conducts an analysis of the exposure scenario to determine which employees had significant exposure. This analysis is completed within a time frame reasonable for the specific disease.

The person responsible for conducting this analysis is a member of the EH&S Research Safety, who is a subject matter expert (SME) in an area related to the incident or other individual knowledgeable in the mechanisms of exposure to ATPs or ATPs-L. This is done within a time frame reasonable for the disease, but no later than 72 hours after Stanford’s report to the local health officer, or the receipt of notification from another employer or the local health officer.

Stanford’s procedures for conducting this analysis are as follows:

5.3.1. Stanford SU-17 Reporting

- 1) Incident reports are received through the submission of an SU-17 form, or through a reporter’s direct contact with the SUOHC.
- 2) The report is triaged to the appropriate SME.
- 3) The SME follows up with the reporter to garner details about the incident and submits a follow-up report.
- 4) The SME communicates with the reporter and their respective supervisor(s) with information on how to prevent future exposures based on the conclusions of the incident analysis.

The analysis shall record the following:

- Names and other appropriate identifiers of people who were included in the analysis.
- The basis for any determination that an employee need not be included in post-exposure follow-up because the employee did not have a significant exposure or

because a PLHCP determined that the employee is immune to the infection in accordance with applicable public health guidelines.

- The name of the person making the determination.
- The identity of any PLHCP or local health officer consulted in making the determination.

The analysis is documented and recorded with the names and any other employee identifier used at the workplace of people who were included in the analysis.

If the analysis determines that either of the following conditions exists for an employee, then that employee does not require post-exposure follow-up, and this is documented:

- The employee did not have significant exposure.
- PLHCP determined that the employee is immune to the infection.

Documentation of any determination that an employee does not require post-exposure follow-up can be found in the medical records of the PLHCP.

The exposure analysis is available to the local health officer upon request.

After determining which employees had significant exposure, they are notified of the date, time, and nature of their exposure within a time frame reasonable for the specific disease, but no later than 96 hours of becoming aware of the potential exposure.

If Stanford determines that employees of any other employer may have had exposure, Stanford shall notify the other employers within a timeframe to provide reasonable assurance that there is adequate time for the employee to receive effective medical intervention to prevent or mitigate the disease, and to permit prompt initiation of an investigation. In no cases shall this notification be longer than 72 hours after the report to the local health officer. Notification shall include the nature, date, and time of the exposure, and shall provide any other information necessary for the other employer to evaluate the potential exposure of their employees. The identity of the source patient shall not be provided to other employers.

As soon as feasible, Stanford provides all employees who had a significant exposure a post-exposure medical evaluation by a PLHCP knowledgeable about the specific disease, including appropriate vaccination, prophylaxis, and treatment. For *M. tuberculosis* and for other pathogens, where recommended by applicable public health guidelines, this includes testing

of the isolate from the source individual or material for drug susceptibility, unless the PLHCP determines that it is not feasible.

The individual assigned to the incident provides the following information to the PLHCP:

- 1) A description of the exposed employee's duties as they relate to the exposure incident.
- 2) The circumstances under which the exposure incident occurred.
- 3) Any available diagnostic test results, including drug susceptibility pattern or other information relating to the source of exposure that could assist in the medical management of the employee.
- 4) All of the employer's medical records for the employee that are relevant to the management of the employee, including tuberculin skin test results and other relevant tests for ATP infections, vaccination status, and determinations of immunity.

Any PLHCP responsible for making determinations and performing procedures as part of the medical services program is provided a copy of title 8 CCR [5199](#), and applicable public health guidelines.

The evaluating PLHCP provides an opinion on whether precautionary removal from the employee's regular job assignment is necessary to prevent the employee from spreading the disease agent and what type of alternative work assignment may be provided. Any recommendation for precautionary removal should be made immediately by phone or fax and also in writing.

The employee is provided with a copy of the PLHCP written opinion within 15 working days of completion of all required medical evaluations.

The employee receives a written determination through their patient portal within 15 working days.

If the PLHCP or local health officer recommends precautionary removal, Stanford maintains the employee's earnings, seniority, and all other employee rights and benefits until the employee is determined to be noninfectious. This includes the employees' right to return to their former job status, as if they had not been removed or otherwise medically limited.

For TB conversions and all ATP-L exposure incidents, the written opinion consists of only the following information:

- The employee's TB test status or applicable reportable aerosol transmissible disease (RATD) test status for the exposure of concern.
- The employee's infectivity status.
- A statement that the employee has been informed of the results of the medical evaluation and has been offered any applicable vaccinations, prophylaxis, or treatment.
- A statement that the employee has been told about any medical conditions resulting from exposure to TB, other RATD or ATP-L, that require further evaluation or treatment and that the employee has been informed of treatment options.
- Any recommendations for precautionary removal from the employee's regular assignment.

Investigation of exposure incidents in the laboratory is necessary to determine what happened, so that Stanford may correct any deficiencies in the procedures, engineering controls, or PPE that were involved to prevent recurrence. Procedures for investigating exposure incidents are as described above in this section.

6. Respiratory Protection Program

A risk assessment may determine that during some operations or under certain conditions, employees must wear respiratory protection. Employees who are required to wear respirators are covered under Stanford's written Respiratory Protection Program, in accordance with title 8 sections 5199 and 5144. See the [Respiratory Protection Program](#) for details.

Medical evaluation:

- The employer shall provide a medical evaluation, in accordance with Stanford University Respiratory Protection Program, to determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator.

Fit testing:

- The employer shall perform either quantitative or qualitative fit tests in accordance with the Stanford University Respiratory Protection Program. The fit test shall be performed on the same size, make, model and style of respirators that the employee will use. When quantitative fit testing is performed, the employer shall not permit an employee to wear a filtering facepiece respirator (FFR) or other half-facepiece respirator, unless a minimum fit factor of 100 is obtained.
- The employer shall ensure that each employee who is assigned to use a filtering facepiece or other tight-fitting respirator passes a fit test: (1) At the time of initial fitting; (2) When a different size, make, model or style of respirator is used; and (3) At least annually thereafter.
- The employer shall conduct an additional fit test when the employee reports, or the employer, PLHCP, supervisor, or ATD Administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
- If, after passing a fit test, the employee subsequently notifies the employer, ATD administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator facepiece and to be retested.

Training:

- Stanford University shall ensure that each respirator user is provided with initial and annual training in accordance with the Stanford University Respiratory Protection Program.
- Employees are enrolled in training (EHS-5010) to ensure that they understand how to properly use and care for their respirators.

7. Recordkeeping

7.1. Summary of Recordkeeping Requirements

The following records will be maintained in accordance with Title 8 CCR 3204 as described in the table below.

- 1) Records of Annual ATD plan review
- 2) Personnel exposure records, including the written zoonotic disease control procedures required by Section 3.4, records of entry into restricted areas, records of atmospheric testing, and records of exposures to hazardous substances
- 3) Records of vaccine availability
- 4) Records of inspections
- 5) Records of the respiratory protection program
- 6) Employee medical records
- 7) Training records

Table 7.1: Recordkeeping Requirements

Record	Information that shall be included in the record	Retention Time
Records of annual ATD plan review	<ul style="list-style-type: none"> • Name of person conducting the review • Date(s) the review was conducted and completed • Name(s) and work area(s) of employees involved • Summary of conclusions 	Three (3) years
Records of exposure incidents	<ul style="list-style-type: none"> • Date of the exposure incident • Names and any other employee identifiers used in the workplace of employees who were included in the exposure evaluation • Disease or pathogen to which employees may have been exposed • Name and job title of person performing the evaluation • Identity of any local health officer and/or PLHCP consulted • Date of the evaluation • Date of contact and contact information for any other employer who either notified the employer or was notified by the employer regarding potential employee exposure 	At least 30 years
Records of unavailability of vaccine	<ul style="list-style-type: none"> • Name of the person who determined the vaccine was not available. • Name and affiliation of person providing the vaccine availability information. • Date of the contact 	Three (3) years

<p>Records of inspection, testing and maintenance of non-disposable engineering controls (e.g., ventilation system, air filtration systems, biosafety cabinets)</p>	<ul style="list-style-type: none"> • Name(s) and affiliation(s) of person(s) performing the test, inspection, or maintenance • Date • Any significant findings and actions that were taken • For airflow testing of vehicles, the following information shall be recorded: <ul style="list-style-type: none"> ○ Model and year of manufacture of the vehicle ○ Partition design ○ Any significant findings and actions, including whether there was detectable airflow from the passenger compartment to the employee area 	<p>Five (5) years</p>
<p>Records of the Respiratory Protection Program</p>	<ul style="list-style-type: none"> • Medical evaluation of respiratory protection use • Fit testing records 	<p>Varies</p>
<p>Medical records</p>	<ul style="list-style-type: none"> • Vaccination status and/or signed declination forms • Any PLHCP written opinions • Results of TB assessments 	<p>At least for the duration of employment plus 30 years</p>
<p>Training records</p>	<ul style="list-style-type: none"> • Date(s) of the training • Contents or summary of the training • Names and qualifications of person conducting the training or who are designated to respond to interactive questions • Names and job titles of all attendees 	<p>Three (3) years from date of training</p>

7.2. Record Availability

All records required to be maintained in Section 7.1, other than the employee medical records, shall be made available upon request to the Chief of the Division of Occupational Safety and Health of the Department of Industrial Relations, or his or her designated representative (Chief) and the National Institute for Occupational Safety and Health (NIOSH), and the local health officer for examination and copying.

Employee medical records required by this subsection shall be provided upon request to the subject employee, anyone having the written consent of the subject employee, the local health officer, and to the Chief and NIOSH in accordance with Section 3204 of these orders, Access to Employee Exposure and Medical Records, for examination and copying.

7.3. Transfer of Records

Stanford University shall comply with the requirements involving the transfer of employee medical and exposure records that are set forth in Title 8 CCR 3204, Access to Employee Exposure and Medical Records, of these orders.

Appendix A – Aerosol Transmissible Diseases/Pathogens

This appendix contains a list of diseases and pathogens which are to be considered aerosol transmissible pathogens or diseases for the purpose of 8 CCR 5199. Employers are required to provide the protections required by 8CCR 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
- Monkeypox/Monkeypox virus
- Novel or unknown pathogens
- Severe acute respiratory syndrome (SARS)
- Smallpox (variola)/Variola virus
- Tuberculosis (TB)/*Mycobacterium tuberculosis* -- Extrapulmonary, 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
- *Mycoplasma pneumoniae*
- 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 B – Aerosol Transmissible Pathogens – Laboratory

This appendix contains a list of agents that, when reasonably anticipated to be present, require a laboratory to comply with 8 CCR 5199 for laboratory operations by performing a risk assessment and establishing a biosafety plan that includes appropriate control measures as identified in the standard.

- Adenovirus (in clinical specimens and in cultures or other materials derived from clinical specimens)
- Arboviruses, unless identified individually elsewhere in this list (large quantities or high concentrations* of arboviruses for which CDC recommends BSL-2, e.g., dengue virus; potentially infectious clinical materials, infected tissue cultures, animals, or arthropods involving arboviruses for which CDC recommends BSL-3 or higher, e.g., Japanese encephalitis, West Nile virus, Yellow Fever)
- Arenaviruses (large quantities or high concentrations of arenaviruses for which CDC recommends BSL-2, e.g., Pichinde virus; potentially infectious clinical materials, infected tissue cultures, animals, or arthropods involving arenaviruses for which CDC recommends BSL-3 or higher, e.g., Flexal virus)
- *Bacillus anthracis* (activities with high potential for aerosol production**, large quantities or high concentrations, screening environmental samples from *b. anthracis* -contaminated locations)
- *Blastomyces dermatitidis* (sporulating mold-form cultures, processing environmental materials known or likely to contain infectious conidia)
- *Bordetella pertussis* (aerosol generation, or large quantities or high concentrations)
- *Brucella abortus*, *B. canis*, *B. "maris"*, *B. melitensis*, *B. suis* (cultures, experimental animal studies, products of conception containing or believed to contain pathogenic *Brucella* spp.)
- *Burkholderia mallei*, *B. pseudomallei* (potential for aerosol or droplet exposure, handling infected animals, large quantities or high concentrations)
- Cercopithecine herpesvirus (see Herpesvirus simiae)
- *Chlamydia pneumoniae* (activities with high potential for droplet or aerosol production, large quantities or high concentrations)
- *Chlamydia psittaci* (activities with high potential for droplet or aerosol production, large quantities or high concentrations, non-avian strains, infected caged birds, necropsy of infected birds and diagnostic examination of tissues or cultures known to contain or be potentially infected with *C. psittaci* strains of avian origin)

- *Chlamydia trachomatis* (activities with high potential for droplet or aerosol production, large quantities or high concentrations, cultures of lymphogranuloma venereum (LGV) serovars, specimens known or likely to contain *C. trachomatis*)
- *Clostridium botulinum* (activities with high potential for aerosol or droplet production, large quantities or high concentrations)
- *Coccidioides immitis*, *C. posadasii* (sporulating cultures, processing environmental materials known or likely to contain infectious arthroconidia, experimental animal studies involving exposure by the intranasal or pulmonary route)
- *Corynebacterium diphtheriae*
- *Coxiella burnetii* (inoculation, incubation, and harvesting of embryonated eggs or cell cultures; experimental animal studies, animal studies with infected arthropods, necropsy of infected animals, handling infected tissues)
- Crimean-Congo hemorrhagic fever virus
- Cytomegalovirus, human (viral production, purification, or concentration)
- Eastern equine encephalomyelitis virus (EEEV) (clinical materials, infectious cultures, infected animals or arthropods)
- Ebola virus
- Epstein-Barr virus (viral production, purification, or concentration)
- *Escherichia coli*, shiga toxin-producing only (aerosol generation or high splash potential)
- Flexal virus
- *Francisella tularensis* (suspect cultures--including preparatory work for automated identification systems, experimental animal studies, necropsy of infected animals, high concentrations of reduced-virulence strains)
- Guanarito virus
- *Haemophilus influenzae*, type b
- Hantaviruses (serum or tissue from potentially infected rodents, potentially infected tissues, large quantities or high concentrations, cell cultures, experimental rodent studies)
- *Helicobacter pylori* (homogenizing or vortexing gastric specimens)
- Hemorrhagic fever -- specimens from cases thought to be due to dengue or yellow fever viruses or which originate from areas in which communicable hemorrhagic fever are reasonably anticipated to be present
- Hendra virus
- Hepatitis B, C, and D viruses (activities with high potential for droplet or aerosol generation, large quantities or high concentrations of infectious materials)

- Herpes simplex virus 1 and 2
- Herpesvirus simiae (B-virus) (consider for any material suspected to contain virus, mandatory for any material known to contain virus, propagation for diagnosis, cultures)
- *Histoplasma capsulatum* (sporulating mold-form cultures, propagating environmental materials known or likely to contain infectious conidia)
- Human herpesviruses 6A, 6B, 7, and 8 (viral production, purification, or concentration)
- Influenza virus, non-contemporary human (H2N2) strains, 1918 influenza strain, highly pathogenic avian influenza (HPAI) (large animals infected with 1918 strain and animals infected with HPAI strains in ABSL-3 facilities, loose-housed animals infected with HPAI strains in BSL-3-Ag facilities)
- Influenza virus, H5N1 - human, avian
- Junin virus
- Kyasanur forest disease virus
- Lassa fever virus
- *Legionella pneumophila*, other legionella-like agents (aerosol generation, large quantities or high concentrations)
- Lymphocytic choriomeningitis virus (LCMV) (field isolates and clinical materials from human cases, activities with high potential for aerosol generation, large quantities or high concentrations, strains lethal to nonhuman primates, infected transplantable tumors, infected hamsters)
- Machupo virus
- Marburg virus
- Measles virus
- Monkeypox virus (experimentally or naturally infected animals)
- Mumps virus
- *Mycobacterium tuberculosis complex* (*M. africanum*, *M. bovis*, *M. caprae*, *M. microti*, *M. pinnipedii*, *M. tuberculosis*) (aerosol-generating activities with clinical specimens, cultures, experimental animal studies with infected nonhuman primates)
- *Mycobacteria* spp. other than those in the *M. tuberculosis* complex and *M. leprae* (aerosol generation)
- *Mycoplasma pneumoniae*
- *Neisseria gonorrhoeae* (large quantities or high concentrations, consider for aerosol or droplet generation)
- *Neisseria meningitidis* (activities with high potential for droplet or aerosol production, large quantities or high concentrations)

- Nipah virus
- Omsk hemorrhagic fever virus
- Parvovirus B19
- Prions (bovine spongiform encephalopathy prions, only when supported by a risk assessment)
- Rabies virus, and related lyssaviruses (activities with high potential for droplet or aerosol production, large quantities or high concentrations)
- Retroviruses, including Human and Simian Immunodeficiency viruses (HIV and SIV) (activities with high potential for aerosol or droplet production, large quantities or high concentrations)
- *Rickettsia prowazekii*, *Orientia (Rickettsia) tsutsuagmushi*, *R. typhi (R. mooseri)*, Spotted Fever Group agents (*R. akari*, *R. australis*, *R. conorii*, *R. japonicum*, *R. rickettsii*, and *R. siberica*) (known or potentially infectious materials; inoculation, incubation, and harvesting of embryonated eggs or cell cultures; experimental animal studies with infected arthropods)
- Rift valley fever virus (RVFV)
- Rubella virus
- Sabia virus
- *Salmonella* spp. other than *S. typhi* (aerosol generation or high splash potential)
- *Salmonella typhi* (activities with significant potential for aerosol generation, large quantities)
- SARS coronavirus (untreated specimens, cell cultures, experimental animal studies)
- *Shigella* spp. (aerosol generation or high splash potential)
- *Streptococcus* spp., group A
- Tick-borne encephalitis viruses (Central European tick-borne encephalitis, Far Eastern tick-borne encephalitis, Russian spring and summer encephalitis)
- Vaccinia virus
- Varicella zoster virus
- Variola major virus (Smallpox virus)
- Variola minor virus (Alastrim)
- Venezuelan equine encephalitis virus (VEEV) (clinical materials, infectious cultures, infected animals or arthropods)
- West Nile virus (WNV) (dissection of field-collected dead birds, cultures, experimental animal and vector studies)
- Western equine encephalitis virus (WEEV) (clinical materials, infectious cultures, infected animals or arthropods)

- *Yersinia pestis* (antibiotic resistant strains, activities with high potential for droplet or aerosol production, large quantities or high concentrations, infected arthropods, potentially infected animals)

* 'Large quantities or high concentrations' refers to volumes or concentrations considerably in excess of those typically used for identification and typing activities. A risk assessment must be performed to determine if the quantity or concentration to be used carries an increased risk, and would therefore require aerosol control.

** 'activities with high potential for aerosol generation' include centrifugation

Appendix C – Vaccination Declination Statements

The employer shall ensure that employees who decline to accept a recommended vaccination offered by the employer sign and date the following statement as required by 8 CCR 5199(h)(5)(E):

General Vaccination Declination Statement

I understand that due to my occupational exposure to aerosol transmissible diseases, I may be at risk of acquiring infection with _____ (name of disease or pathogen). I have been given the opportunity to be vaccinated against this disease or pathogen at no charge to me. However, I decline this vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring _____, a serious disease. If in the future I continue to have occupational exposure to aerosol transmissible diseases and want to be vaccinated, I can receive the vaccination at no charge to me.

Employee Signature

Date

Seasonal Influenza Vaccination Declination Statement

The employer shall ensure that employees who decline to accept the seasonal influenza vaccination offered by the employer sign and date the following statement as required by 8 CCR 5199(h)(10):

I understand that due to my occupational exposure to aerosol transmissible diseases, I may be at risk of acquiring seasonal influenza. I have been given the opportunity to be vaccinated against this infection at no charge to me. However, I decline this vaccination at this time. I understand that by declining this vaccine, I continue to be at increased risk of acquiring influenza. If, during the season for which the CDC recommends administration of the influenza vaccine, I continue to have occupational exposure to aerosol transmissible diseases and want to be vaccinated, I can receive the vaccination at no charge to me.

Employee Signature

Date

Appendix D – Aerosol Transmissible Disease Vaccination Recommendations for Susceptible Health Care Workers

Vaccine	Schedule
Influenza	One dose annually
Measles	Two doses
Mumps	Two doses
Rubella	One dose
Tetanus, Diphtheria, and Acellular Pertussis (Tdap)	One dose, booster as recommended
Varicella-zoster (VZV)	Two doses

Source: California Department of Public Health, Immunization Branch

Immunity should be determined in consultation with *Epidemiology and Prevention of Vaccine-Preventable Diseases*.

Appendix E – Definitions

Aerosol

A suspension of liquid or solid particles in the air, including droplets, droplet nuclei, fomites, and dusts.

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 A.

Aerosol transmissible pathogen (ATP) (Aerosol Transmissible Diseases – Zoonotic definition)

A pathogen that is transmitted by liquid or solid particles in the air, including droplets, droplet nuclei, fomites and dusts.

Aerosol transmissible pathogen - laboratory (ATP-L)

A pathogen that meets one of the following criteria: (1) the pathogen appears on the list in Appendix B, (2) the Biosafety in Microbiological and Biomedical Laboratories (BMBL) recommends biosafety level 3 or above for the pathogen, (3) the biosafety 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 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 **AII** 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.

Alert

A public announcement or notification by a local health officer, or California or federal agency, regarding a detected zoonotic ATP hazard. This notification may be issued for a species or type of animal and/or a geographic area.

Animal Biosafety Level 3 (ABSL-3)

Compliance with the criteria for work practices, safety equipment, and facility design and construction recommended by the CDC in Biosafety in Microbiological and Biomedical Laboratories for work with laboratory animals infected with indigenous or exotic agents, agents that present a potential for aerosol transmission and agents causing serious or potentially lethal disease.

Animals infected with zoonotic ATPs

Animals that (1) have been diagnosed with a zoonotic ATP through recognized testing methods or (2) meet the clinical definition of a suspect case of infection with a zoonotic ATP or (3) have been identified by the CDFA, CDFG, USDA, or USDOJ as requiring isolation, quarantine, or destruction due to suspected or confirmed infection.

Animal waste

Animal carcasses, excrement, contaminated litter, or debris from the bodies of animals, such as feathers or dander.

Biosafety 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 (BSL-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.

Note: The 5th edition is specifically referenced in CCR8.5199, but the most recent published addition is used for establishing biosafety requirements.

Biosecurity procedures

Control measures, such as traffic control, disinfection, and isolation, that are implemented to reduce the risk of transmission of infection into, from, or within an establishment. The purpose of biosecurity measures is to prevent direct or indirect animal-to-animal transmission of zoonotic ATPs, release of pathogens into the environment, and infection of people who may come into contact with animals or areas where animals are housed, or with debris from those areas. The specific biosecurity measures necessary depend on the type of operation conducted by the employer. Typically, no provision for biosecurity other than the use of common sanitation measures is required for incidental removal of animal carcasses or other wastes, unless the activity may result in the introduction of pathogens into areas where animals are kept or housed, or unless the animal is the subject of an applicable alert or disease control order.

Case

Either of the following:

(1) 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.

(2) 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.

CDC

United States Centers for Disease Control and Prevention.

CDFA

California Department of Food and Agriculture.

CDFG

California Department of Fish and Game.

CDPH

California Department of Public Health and its predecessor the California Department of Health Services.

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.

Decontamination

The removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

Immediately dangerous to life or health (IDLH)

An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape.

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 of the California Code of Regulations.

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 mm 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.

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.

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, such as communicable disease contact tracing or screening programs that are reasonably anticipated to be provided to cases or suspected cases of aerosol transmissible diseases.

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.

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.

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.

NIOSH

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

Nonmedical 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:

- 1) There is credible evidence that the pathogen is transmissible to humans by aerosols; and
- 2) The disease agent is:
 - a) A newly recognized pathogen, or
 - b) 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
 - c) A recognized pathogen that has been recently introduced into the human population,
or

d) 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 8 CCR 5199(a)(1). Occupational exposure is presumed to exist to some extent in each of the facilities, services and operations listed in 8 CCR 5199(a)(1). 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 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 correctional facilities and other facilities that house inmates or detainees, homeless shelters, or drug treatment programs 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.

Occupational exposure also includes reasonably anticipated work exposure to a source of zoonotic ATPs under conditions that, without the use of protective measures, create a significant risk of contracting the disease caused by the pathogen. Examples of such conditions include: conducting diagnostic sampling of animals reasonably suspected of infection, performing animal husbandry activities with flocks quarantined due to an

increased risk of infection with zoonotic ATPs, and disposing of infected animal carcasses or their wastes.

Occupational exposure (Aerosol Transmissible Diseases – Zoonotic definition)

Reasonably anticipated work exposure to a source of zoonotic ATPs under conditions that, without the use of protective measures, create a significant risk of contracting the disease caused by the pathogen. Examples of such conditions include: conducting diagnostic sampling of animals reasonably suspected of infection, performing animal husbandry activities with flocks quarantined due to an increased risk of infection with zoonotic ATPs, and disposing of infected animal carcasses or their wastes.

Oxygen deficient atmosphere

An atmosphere with an oxygen content below 19.5% by volume.

Physician or other licensed health care professional (PLHCP)

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.

Public health guidelines

- 1) In regards to tuberculosis, applicable guidelines published by the CTCA and/or CDPH as follows:
 - 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.

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 nonmedical 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.

Respiratory Hygiene/Cough Etiquette in Health Care Settings

Respiratory Hygiene/Cough Etiquette in Health Care Settings, CDC, November 4, 2004.

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.

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:

- 1) 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.
- 2) 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

Test for tuberculosis infection (TB test). 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.

Untreated animal products, byproducts, or wastes

Materials derived from animals that have not been processed in a manner that will deactivate zoonotic ATPs the materials may contain. “Untreated animal products, byproducts, or wastes” do not include animal carcasses or portions thereof that have passed an inspection in accordance with the standards of the USDA or CDFA and have been determined to be fit for human consumption.

USDA

United States Department of Agriculture.

USDOI

United States Department of the Interior, or any of its agencies, including the United States Fish and Wildlife Service and the United States Geological Survey.

Wildlife

Wild birds and other animals that are not domesticated, including their remains and wastes.

Zoonotic aerosol transmissible pathogen (Zoonotic ATP)

A disease agent that is transmissible from animals to humans by aerosol, and is capable of causing human disease. Zoonotic ATPs include pathogens that are classified as transmissible either by droplets or by an airborne route.

Zoonotic ATP incident response

Operations conducted to control an outbreak of an animal disease involving the destruction and/or disposal of animals infected with zoonotic ATPs and the clean up, decontamination and disinfection of areas and equipment associated with the infected animals or their remains.

Appendix F – Resources

External Resources

8 CCR 5199 – Aerosol Transmissible Diseases, <http://www.dir.ca.gov/title8/5199.html>

8 CCR 5199.1 – Aerosol Transmissible Diseases – Zoonotic,
<https://www.dir.ca.gov/title8/5199-1.html>

8 CCR 5144 – Respiratory Protection, <http://www.dir.ca.gov/title8/5144.html>

8 CCR 5221 – Fumigation: General, <http://www.dir.ca.gov/Title8/5221.html>

8 CCR 5222 – Fumigation in Vaults and Chambers, <http://www.dir.ca.gov/Title8/5222.html>

8 CCR 5223 – Fumigation in Buildings or Rooms Other Than Fumigation Vaults or Chambers,
<http://www.dir.ca.gov/Title8/5223.html>

Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5th Edition,
<https://www.cdc.gov/labs/bmbl/index.html>

Note: The 5th edition is specifically referenced in CCR8.5199, but the most recent published addition is used for establishing biosafety requirements.

Respiratory Hygiene/Cough Etiquette in Healthcare Settings,
https://ocde.us/EducationalServices/StudentInitiativesPartnershipsAndEvents/School-Safety/Documents/Pandemic_planning_tools_docs/cdresphygiene.pdf

Stanford Resources

Research Policy Handbook, <https://doresearch.stanford.edu/policies/research-policy-handbook/environmental-health-and-safety/health-and-safety-principles>

Biosafety, <https://ehs.stanford.edu/topic/biosafety-biosecurity>

Injury and Illness Prevention Program, <https://ehs.stanford.edu/wp-content/uploads/OHS-Service-Injury-Illness-Prevention-Program-IIPP.pdf>

Occupational Health Medical Surveillance Program, <https://suohc.stanford.edu/screening-surveillance/>

Respiratory Protection Program, <https://ehs.stanford.edu/topic/general-workplace-safety/respiratory-protection-program>