



Environmental Health & Safety

Aerosol Transmissible Disease Exposure Control Plan

I. Policy

The purpose of this plan is to help provide the policy and procedures needed to eliminate and minimize the risk of illness from aerosol transmissible diseases.

II. Authority

The Aerosol Transmissible Disease Exposure Control Plan was written in accordance with the directions put forth in the California Code of Regulations (CCR) Title 8 §5199. The Director, Environmental Health and Safety (EHS) is responsible for administering this plan and updating as required. The campus Biosafety Officer is also charged with reviewing biological procedures and helping to update the plan.

III. Scope

According to CCR Title 8 §5199 the following facilities, service categories, or operations at CSUF fall the regulations and this plan:

- Clinics, medical offices, and other outpatient medical facilities
- Facilities, services, or operations that are designated to receive persons arriving from the scene of an uncontrolled release of hazardous substances involving biological agents, as defined in HAZWOPER.
- Police services, provided during transport or detention of persons reasonably anticipated to be cases or suspected cases of aerosol transmissible diseases; and police services provided in conjunction with health care or public health operations.
- Facilities where high hazard procedures, as defined in the definitions are performed.
- Laboratories that perform procedures with materials that contain or are reasonably anticipated to contain aerosol transmissible pathogens – laboratory (ATP-L) or zoonotic aerosol transmissible pathogens.
- Maintenance, renovations, service, or repair operations involving air handling systems or equipment or building areas that may reasonably be anticipated to be contaminated with aerosol transmissible pathogens (ATPs) or ATPs-L, including:
 - Areas in which Airborne Infectious Disease (AirID) cases and suspected cases are treated or housed.
 - Air handling systems that serve airborne infection isolation rooms or areas (AIIRs).
 - Equipment such as laboratory hoods, biosafety cabinets, and ventilation systems that are used to contain infectious aerosols.

The following job classifications may have occupational exposure to Airborne Infectious Disease (AirID) at CSUF:

- a. Student Health and Counseling Center (SHCC) staff exposed to AirID due to their work activities.
- b. Physical or Central Plant Staff
 - i. Custodial employees who clean airborne infection isolation (All) rooms or areas.
 - ii. Building Service Engineers (BSE) who maintain, renovate, service, or repair the air handling system, equipment, or building areas in the SHCC or the College of Natural Science and Mathematics (CNSM) in which AirID cases or suspected cases are treated and/or housed.
 - iii. Pest Management Technicians who may experience occupational exposures due to work with animals infected by AirID.
- c. Biology or Biochemistry Department faculty, staff, and students who may experience occupational exposures due to work with animals infected by AirID.
- d. University Police Officers who conduct field operations in which occupational exposure is possible and who refer AirID cases and suspected cases to other facilities

IV. Definitions

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

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

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

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

Airborne infection isolation room or area (AIIR). A room, area, booth, tent, or other enclosure that is maintained at negative pressure to adjacent areas in order to control the spread of aerosolized M. tuberculosis and other airborne infectious

pathogens and that meets the requirements stated in subsection (e)(5)(D) of this standard.

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

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

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

Biosafety level 3. Compliance with the criteria for laboratory practices, safety equipment, and facility design and construction recommended by the CDC in Biosafety in Microbiological and Biomedical Laboratories for laboratories in which work is done with indigenous or exotic agents with a potential for aerosol transmission and which may cause serious or potentially lethal infection. Biosafety in Microbiological and Biomedical Laboratories (BMBL). Biosafety in Microbiological and Biomedical Laboratories, Fifth Edition, CDC and National Institutes for Health, 2007, which is hereby incorporated by reference for the purpose of establishing biosafety requirements in laboratories.

CDC. United States Centers for Disease Control and Prevention.

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

Case. Either of the following:

(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.

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

CTCA. The California Tuberculosis Controllers Association.

Droplet 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 m m in size) containing microorganisms generated from a person who has a clinical disease or who is a carrier of the microorganism.

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

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

Field operation. An operation conducted by employees that is outside of the employer's fixed establishment, such as paramedic and emergency medical services or transport, law enforcement, home health care, and public health. Guideline for Isolation Precautions. The Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, June 2007, CDC, which is hereby incorporated by reference for the sole purpose of establishing requirements for droplet and contact precautions.

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

Health care provider. A physician and surgeon, a veterinarian, a podiatrist, a nurse practitioner, a physician assistant, a registered nurse, a nurse midwife, a school nurse, an infection control practitioner, a medical examiner, a coroner, or a dentist. Health care worker. A person who works in a health care facility, service or operation, or who has occupational exposure in a public health service described in subsection (a)(1)(D).

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

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

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

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.

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.

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.

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

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

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

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

(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.

Occupational exposure. Exposure from work activity or working conditions that is reasonably anticipated to create an elevated risk of contracting any disease caused by ATPs or ATPs-L if protective measures are not in place. In this context, “elevated” means higher than what is considered ordinary for employees having direct contact with the general public outside of the facilities, service categories and operations listed in subsection (a)(1) of this standard. Occupational exposure is presumed to exist to some extent in each of the facilities, services and operations listed in subsection (a)(1)(A) through (a)(1)(I). Whether a particular employee has occupational exposure depends on the tasks, activities, and environment of the employee, and therefore, some employees of a covered employer may have no occupational exposure. For example, occupational exposure typically does not exist where a hospital employee works only in an office environment separated from patient care facilities, or works only in other areas separate from those where the risk of ATD transmission, whether from patients or contaminated items, would be elevated without protective measures. It is the task of employers covered by this standard to identify those employees who have occupational exposure so that appropriate protective measures can be implemented to protect them as required. Employee activities that involve having contact with, or being within exposure range of cases or suspected cases of ATD, are always considered to cause occupational exposure. Similarly, employee activities that involve contact with, or routinely being within exposure range of, populations served by facilities identified in subsection (a)(1)(E) are considered to cause occupational exposure. Employees working in laboratory areas in which ATPs-L are handled or reasonably anticipated to be present are also considered to have occupational exposure.

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

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

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

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

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

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

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

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

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

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

Source control measures. The use of procedures, engineering controls, and other devices or materials to minimize the spread of airborne particles and droplets from

an individual who has or exhibits signs or symptoms of having an ATD, such as persistent coughing.

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

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

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

UVGI. Ultraviolet germicidal irradiation.

V. High Hazard Procedures

No high hazard procedures, as identified in CCR, Title 8, Section 5199 (b) are performed at the Student Health and Counseling Center (SHCC) or College of Natural Science and Mathematics (CNSM).

VI. Assignments or Tasks Requiring Respiratory Protection

The following assignments or tasks may require personal or respiratory protection:

- a. Job assignments involving the professional practice of medicine and allied health care professions may be required to use personal protective equipment including respiratory protection.
- b. Physical or Central Plant Staff assigned to work in the SHCC or CNSM may be required to use personal protective equipment including respiratory protection.
- c. Biology or Biochemistry Department faculty, staff, and students working with animals infected by AirID may be required to use personal protective equipment including respiratory protection.
- d. University Police, in transporting potential AirID cases from class, other academic areas, common university areas, or residence halls, may be required to use personal protective equipment including respiratory protection.

VII. Specific Control Measures for CSUF

Specific control measures for CSUF facilities are identified below:

- a. Engineering controls include regular service intervals of building air handling and distribution systems to ensure optimum performance of the building HVAC system, as recommended by the current ASHRAE standards applicable to campus facilities.
- b. Work practice controls include regular in-service training for staff on the importance of proper hand washing practice, along with adoption of regulatory guidelines relative to the control of infectious disease in health care settings. To reinforce the hand wash behavior, independent hand sanitization stations are located throughout the Student Health Services building, along with instructions on use, and motivational literature designed to encourage hand sanitization etiquette. SHCC custodial staff will be provided appropriate training to include proper cleaning and sanitizing of building components.
- c. Consistent with CDC guidelines for institutions of higher learning, there are no recommendations for more aggressive decontamination procedures than those normally employed by best practice custodial operations in schools and colleges. CSUF will continue to use cleaning products and processes that are considered current industry standard.
- d. SHCC personnel and other identified job classifications with occupational risk for AirID will be provided with personal protective equipment by the University that is appropriate to their jobs. Clinical staff will be provided with eye protection, and disposable gowns, non-latex single use gloves, and disposable foot covers if required. Other job classifications with occupational risk for AirID will be provided with non-latex gloves. All job classifications identified will be medically assessed, trained, and fit tested with the appropriate N-95 single use filtering face piece respirator.

VIII. Source Control Measures

Source control measures to be utilized in work areas where persons with suspected AirID symptoms are encountered:

- a. Persons with suspected AirID symptoms will be provided with disposable tissues, hand hygiene materials, and masked or placed in such a manner that contact with employees not wearing respiratory protection is eliminated or minimized until transfer or placement in an All can be accomplished, or
- b. Persons with suspected AirID symptoms will be placed in an All room or area or transferred to a facility with All rooms or areas. The employer shall ensure that this placement or transfer is effected in a timely manner.
- c. All employees entering the All room or area housing individuals with suspected AirID are provided with and use appropriate personal protective equipment and respiratory protection.

IX. Procedures to Identify, Isolate, and Refer AirID Cases or Suspected AirID Cases

The following procedures will be used to identify, isolate, and refer AirID cases or suspected AirID cases:

- a. CSUF will use the following procedures regarding isolation of employees who report AirID symptoms:
 - i. Employees who suspect they are symptomatic of influenza like illness (ILI) or AirID are encouraged to stay home and seek treatment from their normal healthcare providers. Employees who have ILI symptoms should self-isolate from other family members, practice good hand hygiene, use source control methods (surgical masks) when around other family members, and remain away from work or public gatherings until 48 hours after fever and symptoms have abated.
 - ii. Employees who report to work, and later develop AirID symptoms will be encouraged by their supervisors or appropriate administrators to take sick leave and remain away from work until fever and symptoms have abated.
- b. The SHCC treats only normally matriculated students, and as such does not treat employees. Isolation procedures engaged by the SHCC for students who present with AirID symptoms include, after initial contact with PLHCP personnel:
 - i. If patient does not reside in on campus housing, patient will be advised to go home and self-isolate until no longer symptomatic.
 - ii. If patient is housed on campus, the SHCC will contact Housing and Residential Life and advise that a resident is symptomatic for AirID. The patient/student will be housed in a single room, equipped with a dedicated ventilation and heating system. Further actions will be dictated by medical requirements.

X. Employee Medical Services

Employee medical services are provided by the University through a contract occupational medical provider. Required vaccinations, either enumerated in this standard or elsewhere in CCR, Title 8, General Industry Safety Standards, are provided to appropriate employee job classifications as required by this cited standards. Employees who are offered required vaccinations, but decline, are required to sign a declination of vaccination form, which becomes a part of the employee's permanent medical record. If a required vaccine is requested by the University from the contract medical provider, and there is a delay in vaccine delivery, the contract medical provider will provide a written declaration to the University enumerating the unavailability of the vaccine currently, and an estimate of when the vaccine will be available.

XI. Exposure Incident Procedures

If the University is informed that an employee may have an reportable aerosol transmissible disease (RATD) or been exposed to someone who may have a RATD, the following actions shall be taken:

- a. Within 72 hours of the time the University was informed regarding the potential occupationally related exposure, the pertinent facts surrounding the exposure will be gathered by the appropriate administrator to determine if a significant exposure may have occurred (significant exposure means working within six feet of a suspected AirID person, or being directly exposed to aerosol droplets from a person with suspected AirID). This report and subsequent required reporting and decision making shall be conducted by a campus employee with demonstrated knowledge of epidemiology and the methods for controlling infectious disease exposure. If a determination is made that a significant exposure to a University employee has not occurred, and that no post-exposure prophylaxis is required, the information used to make that determination shall be documented.
- b. Within 96 hours of the significant exposure, the University shall notify employees in adjacent work stations regarding the nature of the potential exposure.
- c. As soon as feasible, the University shall provide post exposure medical evaluations to employees who may have had a significant exposure to the index case. The medical evaluation shall be performed by the University occupational medical provider, unless the affected employee has submitted a Pre-designation of Personal Physician form to University Risk Management.

XII. Exposure Incident Evaluation

CSUF will assess each suspected exposure incident involving an employee according to established incident investigation protocols detailed in the University Injury and Illness Prevention Program. Refer to that document for written procedures.

XIII. High Communication to Employees of Suspected or Confirmed AirID Cases

Managers and supervisors shall maintain current public health information provided by the University on AirID cases at CSUF. Regular briefings shall be provided to employees that may have occupational exposure to AirIDs. The briefings shall be recorded and maintained as required by CSU Record Retention guidelines.

XIV. Communication of Reportable Disease Occurrence to Public Health Authorities

Information regarding any reportable disease occurrence on campus will be made available by appropriate University officials to the authority having jurisdiction regarding public health and reportable infectious disease. All HIPAA (Health Insurance Portability and Accountability Act) guidelines regarding patient confidentiality will be observed as required.

XV. Personal Protective Equipment

SHCC, University Police, and any additionally identified campus departments or offices where occupational exposure to AirID may occur will procure and maintain adequate supplies of N-95 respirators in required sizes. Methods for ensuring adequate supplies shall be developed by the identified departments based on the following general guideline. Departments will maintain a list of trained medically evaluated and fit tested employees (based on their exposure potential). Each department shall maintain a supply of N-95 respirators sufficient to supply one unit per covered employee per shift, plus 5% for additional incidental use. If a city, county, region, or national health emergency is declared, the department shall increase its incidental reserve by 5%.

XVI. Employee Training

CSUF managers and supervisors shall ensure that initial and update trainings on the requirements of this plan are provided to all employees in their respective areas of responsibility. All training shall be documented, with records of the training maintained by the custodian of records for EHS training.

XVII. Medical Records

Medical records generated by employees treated for occupationally acquired illnesses will be maintained as required and stipulated in the Employee Medical Monitoring Plan and by the CSU System Executive Order 1031. The provisions of the Health Insurance Portability and Accountability Act (HIPAA) also govern the maintenance and access to employee medical records.

XVIII. Employee Involvement in Review of Exposure Control Plan

CSUF managers and supervisors shall hold regular safety briefings for their staff, recording the date, subject, and agenda for each meeting. At these meetings, during identified public health emergencies, and during quiescent periods, employees and their supervisors and managers shall exchange information regarding the provisions of this plan, and any other information regarding AirID that may be germane.

XIX. Surge Procedures

The University will not provide surge capacity services (rapid deployment of experienced coordination experts) for local public health agencies. Surge processes on campus will be guided by Orange County Health Care Agency guidelines and directives from the CSU Chancellor's office.

Appendix A – Aerosol Transmissible Diseases/Pathogens (Mandatory)

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

Diseases/Pathogens Requiring Airborne Infection Isolation

Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease, e.g. Anthrax/Bacillus anthracis
Avian influenza/Avian influenza A viruses (strains capable of causing serious disease in humans)
Varicella disease (chickenpox, shingles)/Varicella zoster and Herpes zoster viruses, disseminated disease in any patient. Localized disease in immunocompromised patient until disseminated infection ruled out
Measles (rubeola)/Measles virus
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
Mycoplasmal pneumonia
Parvovirus B19 infection (erythema infectiosum)
Pertussis (whooping cough)
Pharyngitis in infants and young children/Adenovirus, Orthomyxoviridae, Epstein-Barr virus, Herpes simplex virus,
Pneumonia
 Adenovirus
 Haemophilus influenzae Serotype b, infants and children
 Meningococcal
 Mycoplasma, primary atypical

Streptococcus Group A

Pneumonic plague/*Yersinia pestis*

Rubella virus infection (German measles)/Rubella virus

Severe acute respiratory syndrome (SARS)

Streptococcal disease (group A streptococcus)

Skin, wound or burn, Major

Pharyngitis in infants and young children

Pneumonia

Scarlet fever in infants and young children

Serious invasive disease

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

Any other disease for which public health guidelines recommend droplet precautions

Appendix B: Aerosol Transmissible Pathogens – Laboratory (Mandatory)

This appendix contains a list of agents that, when reasonably anticipated to be present, require a laboratory to comply with Section 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 haemorrhagic 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) tsutsugamushi, 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 C1 – Vaccination Declination Statement (Mandatory)

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 subsection (h)(5)(E):

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

Appendix D: Aerosol Transmissible Disease Vaccination Recommendations for Susceptible Health Care Workers (Mandatory)

Vaccine	Schedule
Influenza	One dose annually
Measles	Two doses
Mumps	Two doses
Rubella	One dose
Tetanus, Diptheria, 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*.

<p>Responsible Executive: Director of Environmental Health and Safety</p> <p>Responsible Office: Environmental Health and Safety</p> <p>Originally Issued: 2009</p> <p>Revised: 1/2012 1/2015</p>
