



AEROSOL TRANSMISSIBLE DISEASES STANDARD

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California Code of Regulations, Title 8, Section 5199 protects employees who may be exposed at work to aerosol transmissible diseases (ATDs). ATDs, such as tuberculosis, and measles, are transmitted by infectious particles or droplets through inhalation or direct contact with mucous membranes in the respiratory tract or eyes. ATDs that spread via the airborne route are called airborne infectious diseases (AirID).

The standard also covers aerosol transmissible pathogens – laboratory (ATPs-L), which are aerosolized in laboratory procedures. Pathogens that are novel or listed in Appendix D of this standard are also ATPs-L.

Laboratory exposures to zoonotic ATDs (those transmitted from animals to humans) are also covered by this standard, but zoonotic ATD exposures in non-laboratory settings are covered by the ATD-zoonotic standard, section 5199.1.

The standard applies to employers that have employees with occupational exposure, defined as “exposure from work activity or working conditions that is reasonably anticipated to create an elevated risk of contracting any disease caused by ATDs if protective measures are not in place.” Some employers must comply with the full standard, but others are only required to comply with certain parts, provided they meet specified criteria. Covered employers must conduct an exposure assessment to determine which of their employees have occupational exposure to ATDs.

What Employers Are Covered?

The following employers are presumed to have employees with occupational exposure to ATDs:

- Health care providers and services (hospitals, clinics, skilled nursing, home health, EMS, medical transport, and facilities performing high-hazard procedures);
- Biological hazard response facilities receiving individuals exposed to biological releases;
- Law enforcement involved in transport, detention, or support of suspected ATD cases;
- Public health services (contact tracing, screening, and services provided in health care settings);
- High-risk congregate settings (correctional facilities, homeless shelters, drug treatment programs);
- Post-mortem services performing aerosol-generating procedures (coroners, medical examiners, mortuaries);
- Laboratories handling aerosol transmissible pathogens (ATP-L or zoonotic pathogens).

Depending on the type of workplace and level of exposure risk, employers fall into one of three categories:

1. Full-Standard Employers
2. Referring Employers
3. Laboratories

Guidance for determining the appropriate category is available in Cal/OSHA's publication titled "The California Workplace Guide to Aerosol Transmissible Diseases at https://www.dir.ca.gov/dosh/dosh_publications/ATD-Guide.pdf.

Full-Standard Employers

Full-Standard employers diagnose, treat, transport or house individuals with airborne infectious diseases (AirID), such as tuberculosis or measles. Examples include hospitals, emergency medical services, certain correctional facilities, and some laboratories.

Full-Standard employers must develop, implement, and maintain a comprehensive written ATD Exposure Control Plan that includes:

- List of job classifications exposed to ATDs;
- List of high hazard procedures and operations, and job classifications exposed to those procedures;
- List of assignments or tasks requiring personal or respiratory protection;
- Engineering controls (airborne infection isolation rooms or areas, local exhaust ventilation, high efficiency particulate air filtration, and ultraviolet germicidal irradiation);
- Work practice controls (source control procedures, posting of respiratory hygiene and coughing etiquette, availability of surgical masks and handwashing facilities or alcohol-based hand sanitizers, isolation precautions and procedures, and decontamination procedures);
- Procedures for the timely identification and appropriate placement of patients who require airborne infection isolation;
- Communication procedures to and from which patients are transported that includes receiving information of infectious disease status of patients that will be or have been treated or transported, and notifying employees and other employers whose employees have had an exposure incident;
- Provide personal protective equipment and respirators (conduct assessment prior to providing);
- Respiratory protection program (in accordance with Title 8 CCR section 5144);
- Exposure incident and notification procedures;
- Medical services (vaccinations, annual assessments for latent tuberculosis infection and timely post-exposure medical evaluation);
- Training (initial, annual and when there are changes that may affect worker ATD exposure);
- Surge procedures (how respiratory and personal protective equipment will be stockpiled, accessed or procured, and how the facility or operation will interact with the local and regional emergency plan);
- Recordkeeping of required documentation and records (employee training and medical records, inspections of ventilation systems and other engineering controls, exposure incidents, and if applicable respiratory protection program).

Referring Employers

Referring employers screen individuals for ATDs and refer suspected or confirmed cases to facilities equipped for treatment. They do not provide ongoing treatment, housing, transport beyond referral, or airborne isolation. Examples include many primary care clinics, some skilled nursing facilities, some correctional facilities, homeless shelters, and drug treatment programs. Employees working at such facilities may have direct contact with individuals confirmed or suspected to have an AirID and are therefore at increased risk for infection but not to the same extent as employees in a medical treating facility.

Referring employers must comply with subsection (c) of the ATD standard and the following requirements in place:

- Infection control procedures of cleaning and disinfecting work areas, vehicles, and equipment that may become contaminated with ATPs. The procedures must also include a list of the job categories in which employees have occupational exposure to ATDs.
- Work practice controls (source control procedures, posting of respiratory hygiene and coughing etiquette, availability of surgical masks and handwashing facilities or alcohol-based hand sanitizers, isolation precautions and procedures, and decontamination procedures)
- Procedures for screening and referral of patients exhibiting symptoms of AirIDs to appropriate facilities for treatment (sample screening criteria for non-medical employees for screening purposes are available at Appendix F of ATD standard section 5199);
- Procedures to communicate with employees, other employers, and local health officer regarding the known or suspected infectious diseases status of referred patients;
- Procedures to reduce the risk of ATD transmission during the period a person requiring referral is in the facility or is in contact with employees (this includes the time during the screening and while the patient awaits transfer to another facility, such as placing the patient in a separate room away from other patients);
- Medical services for employees (vaccinations annual assessments for latent tuberculosis infection and timely post-exposure medical evaluation);
- Training (initial, annual and when there are changes that may affect worker ATD exposure);
- Employee training and medical records, inspections of ventilation systems and other engineering controls, exposure incidents, and if applicable respiratory protection program).
- Active involvement of employees in evaluating the effectiveness of the BioSafety Plan in their work areas on an annual basis

Laboratories

Laboratories performing procedures that may aerosolize pathogens must comply with subsection (f) of the ATD standard, including implementation of a written Biosafety Plan, consistent with CDC recommendations in the Biosafety in Microbiological and Biomedical Laboratories (BMBL), to protect laboratory workers from exposures to ATPs-L. If laboratory staff also have contact with ATD patients or infected cadavers, the laboratory must comply with full-standard requirements. The ATD standard requires laboratory employers to use feasible engineering and work practice controls to limit exposure to infectious aerosols and to provide PPE and respirators when necessary to control exposures. The employer is also required to keep records of training, inspections, exposure incidents, the respiratory protection program, vaccinations, and evaluation of engineering controls and other control measures. In addition, the Biosafety Plan must include the following:

- List of all job classifications, tasks, and procedures in which employees have occupational exposure to ATPs-L;
- List of the ATPs-L that are present or reasonably expected to be present in laboratory materials and the applicable biosafety measures;
- Safe handling and control measures and a list of prohibited practices, such as sniffing in vitro cultures;
- Engineering controls, including containment equipment and procedures, such as biosafety cabinets;
- Procedures identifying the use of personal protective equipment to minimize exposure and any operations or conditions requiring respirators;
- Effective decontamination and disinfection procedures for laboratory surfaces and equipment;
- A requirement that all incoming materials containing ATPs-L be treated as containing the virulent of wild-type pathogen until procedures conducted at the laboratory verify they are deactivated or attenuated;
- Inspection procedures including audit of biosafety procedures, to be performed at least annually;
- Emergency procedures for uncontrolled releases within the laboratory surfaces and equipment;
- Medical services for employees (vaccinations, annual assessments for latent tuberculosis infection and timely post-exposure medical evaluation);
- Training (initial and annual including the Biosafety Plan and emergency procedures);
- Active involvement of employees in evaluating the effectiveness of the Biosafety Plan in their work areas on an annual basis.

Respiratory Protection

N95 respirators are required in many airborne exposure situations. Powered air-purifying respirators (PAPRs) are required for certain high-hazard aerosol-generating procedures. Surgical masks are not respirators and do not offer the wearer any protection from ATPs.

Additional information on ATD standard is available below:

“The California Workplace Guide to Aerosol Transmissible Diseases”

https://www.dir.ca.gov/dosh/dosh_publications/ATD-Guide.pdf

“Aerosol Transmissible Pathogens – Laboratory (Mandatory)”

Title 8 CCR 5199, Appendix D

<https://www.dir.ca.gov/title8/5199d.html>

“ATD Vaccination Recommendations for Susceptible Health Care Workers (Mandatory)”

Title 8 CCR 5199, Appendix E

<https://www.dir.ca.gov/title8/5199e.html>

“Sample Screening Criteria for Work Settings Where No Health Care Providers Are Available (non-mandatory)”

Title 8 CCR 5199, Appendix F

<https://www.dir.ca.gov/title8/5199f.html>