

Infectious Diseases and Worker Health and Safety

The Cal/OSHA Aerosol Transmissible Diseases (ATD) Standard:

A decade of experience and a model for state and Federal infectious disease standards

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The Cal/OSHA Aerosol Transmissible Diseases (ATD) standard was adopted in 2009 to **protect employees who are at increased risk of contracting droplet and airborne spread infections due to their work activities.**

The standard is codified in title 8 of the California Code of Regulations, section 5199.

Section 5199 defines an aerosol transmissible disease as a disease for which **droplet or airborne precautions are required**, as listed in Appendix A of the Standard. These diseases can be transmitted by infectious particles or droplets through inhalation or direct contact with the mucous membranes of the eyes or respiratory tract.

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California OSHA's Aerosol Transmissible Diseases Standard (ATD)

Developed and proposed by the CalOSHA Standards Board under their OSHA State Plan authority.

Rare standard originated from request from California Healthcare Employers

Was the first enforceable comprehensive **worker health and safety protection** standard for Aerosol Transmissible Disease in the United States and around the world.

Could become model for a nationwide OSHA Standard, as did California BBP and Safer Sharps in the 1980s and 1990s.




Final Board vote 6-0 to adopted on May 21, 2009, at the beginning of the H1N1 pandemic.



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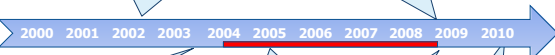
Occupational Health and Infectious Disease History, 1990s



- 1986:** Healthcare Unions petitioned OSHA in 1986 for the standard
- 1994:** OSHA issues Bloodborne Pathogens standard
- 1994:** OSHA initiates TB rulemaking in January 1994
- 1994:** Coalition to Fight TB in the Workplace (14 Unions) petitioned OSHA for the standard.
- 1995:** OSHA issues proposed rule Occupational Exposure to Tuberculosis for public comments and hearings
- 1998:** OSHA exempts TB from updated respiratory protection standard

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Occupational Health and Infectious Disease History, 2000s



- 2000:** SARS outbreak in Asia & Canada
 - Droplet vs Airborne spread dispute
 - Respirator vs mask dispute
- 2004:** OSHA withdraws Tb rulemaking. Healthcare employers must follow 1998 OSHA respirator standard
- 2004-2009:** -CalOSHA developed ATD Standard from 2004 – 2009. Health Systems had asked CalOSHA for relief from fit testing
- 2009:** CalOSHA Standards Board vote 6-0 to adopted ATD Standard at beginning of the H1N1 pandemic
- 2009:** OSHA request for information occupational exposure to infectious agents in healthcare settings
- 2009:** H1N1 outbreak
 - Droplet vs Airborne spread dispute
 - Respirator vs mask dispute
 - Fit testing dispute

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AWARD WINNING Cal-OSHA Reporter

CREDIBLE AUTHORITY TRUSTWORTHY
 May 28, 2009 Vol. 30, No. 21 www.cal-osha.com Since 1979

Standard Board Report

Another California Landmark — ATD, Zoonotic Disease Protections Adopted

OSHA ENDS — It — or when — a deadly new influenza strain strikes California, protection from aerosol transmissible diseases (ATDs) the Cal/OSHA Standards Board voted to pass in great May 21 would prevent the kind of inaction related to the board by some health care workers before it can be back to work.

Dahlger, a Canaltio nurse and executive director of the State Office of California (part of Service Employees International Union) said that at the height of the H1N1 outbreak, she emergency room manager was contacted by the hospital to read outside the front door of the ER and hand out surgical masks to patients and visitors.

But there was a "real risk" to "seeing" patients with surgical masks?

Regina Dahlger, Nurse

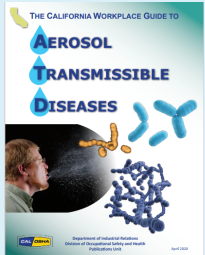
firefighters and other emergency responders

- Facilities, services or operations that require persons from spaces of uncontrolled hazardous substances releases involving biological agents
- Public officials who must transport another detainee persons who might be "reasonably anticipated" to be infected with ATDs
- Public health services
- Construction facilities, homeless shelters and displacement programs
- Operations that perform aerosol generating procedures on children
- Laboratories that perform procedures with materials containing ATDs
- Maintenance, service or repair operations involving air-handling systems that may be adversely impacted by the contaminated with ATDs
- Any other facility that has been determined by writing by the chief of the Division of Occupational Safety and Health (DOSH) by special order to require application of the standard

The standard has three levels of requirements, the highest of

A Brief History of the Adoption of the Aerosol Transmissible Diseases Standard in California in 2009
 by Mark Catlin, 2019

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ATD Standard Content

- (a) Scope and Application
- (b) Definitions
- (c) Referring Employers
- (d) **Aerosol Transmissible Diseases Exposure Control Plan**
- (e) Engineering and Work Practice Controls and Personal Protective Equipment
- (f) Laboratories
- (g) Respiratory Protection
- (h) Medical Services
- (i) Training
- (j) Recordkeeping

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

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Appendix A – Aerosol Transmissible Diseases/Pathogens (Mandatory)

Diseases/Pathogens Requiring Airborne Infection Isolation

Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease, 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
 Measles (rubeola)/Measles virus
 Monkeypox/Monkeypox virus
 Novel or unknown pathogens ← **H1N1, Ebola, coronavirus**
 Severe acute respiratory syndrome (SARS)
 Smallpox (variola)/Variola virus
 Tuberculosis (TB)/*Mycobacterium tuberculosis* -- Extrapulmonary, draining lesion; Pulmonary or laryngeal disease
 Any other disease for which public health guidelines recommend airborne infection isolation ←

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Appendix A – Aerosol Transmissible Diseases/Pathogens (Mandatory)

Diseases/Pathogens Requiring Droplet Precautions

Diphtheria/diphtheria
 Erythritol, due to *Haemophilus influenzae* type b
Haemophilus influenzae Serotype b (Hib) disease/*Haemophilus influenzae* serotype b -- Infants and children
 Influenza, human (typical seasonal influenza)/Influenza viruses
 Meningitis
Haemophilus influenzae, type b known or suspected
Neisseria meningitidis (meningococcal) known or suspected
 Meningococcal disease serpis, pneumonitis (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 pneumoniae
 Streptococcus Group A
 Pertussis (whooping cough)
 Rubella virus infection (German measles)/Rubella virus
 Severe acute respiratory syndrome (SARS)
 Streptococcal disease (group A streptococcus)
 Titax, viral or toxic, Stage
 Pharyngitis in infants and young children
 Pertussis
 Scarlet fever in infants and young children
 Serious invasive disease
 Viral hemorrhagic fever due to Lassa, Ebola, Marburg, Crimean-Congo fever viruses (airborne infection isolation and see Any other disease for which public health guidelines recommend droplet precautions

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CalOSHA Aerosol Transmissible Diseases Standard (ATD)

(a) Scope and Application.
 (1) Scope. This section applies to work in the following facilities, service categories, or operations:
 (A) Each of the following health care facilities, services, or operations:
 1. Hospitals
 2. Skilled nursing facilities
 3. Clinics, medical offices, and other outpatient medical facilities
 4. Facilities where high hazard procedures, as defined in subsection (b), are performed
 5. Home health care
 6. Long term health care facilities and hospices
 7. Medical outreach services
 8. Paramedic and emergency medical services including these services when provided by firefighters and other emergency responders
 9. Medical transport

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Scope of the CalOSHA ATD Standard (continued)

(B) Facilities designated to receive persons arriving from the scene of an uncontrolled release of hazardous substances involving biological agents

(C) Police services, provided during transport or detention of persons reasonably anticipated to be cases or suspected cases and police services provided in conjunction with health care or public health operations.

(D) Public health services, 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,

(E) The following facilities that are identified as being at increased risk for transmission of aerosol transmissible disease (ATD) infection:
 1. Correctional facilities and other facilities that house inmates or detainees
 2. Homeless shelters
 3. Drug treatment programs

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Scope of the CalOSHA ATD Standard (continued)

(F) Facilities that perform aerosol-generating procedures on cadavers such as pathology laboratories, medical examiners' facilities, coroners' offices, and mortuaries.

(G) Laboratories that perform procedures with materials that contain or are reasonably anticipated to contain aerosol transmissible pathogens

(H) Any other facility, service or operation that has been determined in writing by the Chief of the Division of Occupational Safety and Health

(I) Maintenance, renovation, 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

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(d) Aerosol Transmissible Diseases Exposure Control Plan

- (1) The employer shall establish, implement, and maintain an effective, written site – specific ATD Exposure Control Plan which contains required elements; including:
- The person(s) responsible for administering the Plan. This person shall be knowledgeable in infection control principles and practices
 - A list of all job classifications in which employees have occupational exposure.
 - A list of all high hazard procedures performed, and the job classifications and operations in which employees are exposed to those procedures
 - A list of all assignments or tasks requiring personal or respiratory protection
 - The methods of implementation of specific control measures shall be listed for each operation or work area in which occupational exposure occurs. These measures shall include applicable engineering and work practice controls, cleaning and decontamination procedures, and personal protective equipment and respiratory protection.

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(h) Medical Services

- (8) Precautionary removal recommendation from the physician or other licensed health care professional (PLHCP).

(B) Where the PLHCP recommends precautionary removal, or where the local health officer recommends precautionary removal, **the employer shall maintain** until the employee is determined to be noninfectious, **the employee's earnings, seniority, and all other employee rights and benefits, including the employee's right to his or her former job status**, as if the employee had not been removed from his or her job or otherwise medically limited.

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Records of Implementation of the ATD ECP and/or Biosafety Plan

Employers are required to maintain many records in addition to medical and training records. The table below summarizes these requirements.

Record	Information that Must Be Included in the Record	Retention Time	Other Applicable Title 8 Section
Records of annual ATD or Biosafety 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 	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 (as an exposure record)	3204

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Surge Events

"The [surge] plan shall include work practices, decontamination facilities, and appropriate personal protective equipment and respiratory protection for such events. **The procedures shall include 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."



California Code of Regulations, Title 8, § 5199

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Benefits of the ATD Standard, from 2009-20

1. Creates clear enforceable requirements – provides notice up front to employers and employees
2. Gives Cal/OSHA a "seat at the table" for infectious disease events
3. Worker/Union participation required
4. Mandates preparedness for health care employers
5. Makes CDPH requirements enforceable

Then the 2020 pandemic ...

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CalOSHA COVID-19 Citations with ATD Standard Violation (Late August 2020 to Mid February 2021)

Industry	Number of Inspections with Citations
Hospitals	27
Long Term Care / Nursing Homes	12
Medical Offices	2
Corrections/ Jails	8
Police / Public Safety	2
TOTAL	51

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New York/New Jersey Education and Research Center 41st Annual Scientific Meeting
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Date Issued	Establishment Name	NAICS Code/ Industry	Inspection Type	Inspection Site (city)	COVID-19 Violations
2/5/2021	Sutter Bay Hospitals DBA Alta Bates Summit Medical Center	NAICS: 622110/General Medical and Surgical Hospitals	Accident-initiated	Oakland	Serious - 1 Total Violations - 1
2/1/2021	State of California, Dept. of Corrections & Rehabilitation DBA San Quentin State Prison	NAICS: 922140/Correctional Institutions	Accident-initiated	San Quentin	Regulatory - 1 General - 2 Willful - 4 Serious - 2 Total Violations - 9
1/26/2021	KF Sunray, LLC DBA Sunray Healthcare Center	NAICS: 623110/Nursing Care Facilities	Fatality-initiated	Los Angeles	Serious - 2 General - 1 Total Violations - 3

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Cal/OSHA Citation Date	Healthcare Facility	Inspection Type	Proposed COVID-19 Penalty	Reason for COVID-19 Citations
Nov 13 2020	Kaiser Hospitals Redwood City Medical Center	Complaint	\$39,685	Not reporting to Cal/OSHA serious illness, Not logging illnesses in their log 300, Not implementing control measures, Not providing and ensuring respirators used Not investigating exposure incidents, Not notifying staff of exposure to suspected or confirmed person with COVID-19, Not providing post medical services, Not providing aerosol transmissible pathogen training to staff
Oct 26 2020	Kaiser Hospital - San Francisco	Accident	\$16,400	Not providing COVID-19 medical records to Cal/OSHA when requested, Not implementing an effective ATD Exposure Control Plan, Not screening employees for symptoms, Not providing N95 respirators to staff Not implementing universal masking for staff.

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Thoughts on a Decade of Experience with the CalOSHA ATD

1. Standard should be based on aerosol transmission and not the outdated droplet/airborne paradigm
2. Must cover novel pathogens
3. Consider separate standards for healthcare and related sites (like ATD) and general industry
4. Employer requirement to conduct site-specific hazard assessment and create site-specific exposure control plan
5. Employer requirement for worker and union involvement and recordkeeping
6. Address asymptomatic transmission, with a universal precautions approach when necessary, as with BBP standard
7. Healthcare sector / infection prevention must fully accept responsibility for worker health and aim to excel at preventing occupational exposure to pathogens

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Look forward to discussing this now and later:

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