

Interim Guidance for Protecting Health Care Workers from Exposure to 2019 Novel Coronavirus (2019-nCoV)

Cal/OSHA's regulations require protection for workers exposed to airborne infectious diseases such as the 2019 novel (new) coronavirus (2019-nCoV), first identified in Wuhan City, China in December 2019. This interim guidance provides employers and workers in health care settings with vital information for preventing exposure to the virus. Employers and employees should review their own health and safety procedures as well as the recommendations and standards detailed below, to ensure workers are protected from 2019-nCoV.

Virus Signs, Symptoms and Transmission

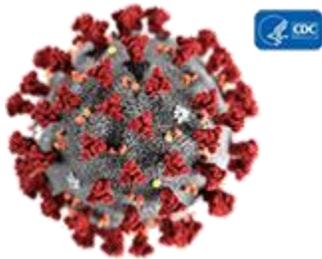


Photo: Alissa Eckert & Dan Higgins

Common signs and symptoms of this illness include fever, cough and difficulty breathing. In recently reported cases, symptoms have ranged in severity from mild illness to death. The time from exposure to symptom onset ranges from two to 14 days. The virus can be spread from person-to-person, but it is unclear how easily 2019-nCoV is spreading between people at this time. While the U.S. Centers for Disease Control and Prevention (CDC) considers the current risk of infection in the U.S. to be low, risk for infection is higher in health care settings such as hospitals and clinical laboratories.

Cal/OSHA Requirements

The Aerosol Transmissible Diseases (ATD) standard (California Code of Regulations, title 8, section 5199), contains requirements for protecting employees from diseases and pathogens transmitted by aerosols. 2019-nCoV is an airborne infectious disease covered by the ATD standard. The regulation applies in health care facilities, laboratories, public health services, police services and other locations where employees are reasonably anticipated to be exposed to confirmed or suspected cases of aerosol transmissible diseases.

The ATD standard requires covered employers to protect employees from airborne infectious diseases such as 2019-nCoV through effective:

- [Written ATD exposure control plan and procedures](#)
- [Training](#)
- [Engineering and work practice controls](#)
- [Personal protective equipment](#)
- [Medical services](#) including vaccination and infection determination and treatment
- [Laboratory operation requirements](#)

The requirements are less stringent where exposure to airborne infectious diseases are limited. There are specific requirements for laboratories that handle pathogens in [section 5199\(f\)](#).

Written ATD Exposure Control Plan and Procedures

Some of the key requirements in a written ATD exposure control plan applicable to protecting workers from 2019-nCoV include but are not limited to:

- A description of the source control measures to be implemented at the worksite, and the method of informing people entering the worksite of the source control measures. A source control measure is a procedure, engineering control, device or material that minimizes the spread of airborne particles from a possible infected individual.
- Procedures to identify, temporarily isolate, and move suspected cases to airborne infection isolation rooms or areas. These procedures must include methods to limit employee exposure to patients when they are not in an airborne infection isolation room or area.
- Procedures to communicate with employees and other employers regarding the suspected or confirmed infectious disease status of persons to whom employees are exposed in the course of their duties.
- Procedures the employer will use to ensure that there is an adequate supply of personal protective equipment and other equipment necessary to minimize employee exposure to airborne infectious diseases, in normal operations and in foreseeable emergencies.
- Procedures, including work practices, decontamination facilities, and appropriate personal protective equipment for surge events. Employers who have employees designated to provide services in surge conditions must have such procedures. A surge is a large and rapid increase in the number of cases. Surge procedures extend beyond direct patient care and include tasks such as laboratory studies and epidemiological investigations.
- Procedures to identify potential employee exposures, evaluate each exposure incident, determine the cause, determine which employees had a significant exposure, provide medical follow-up for exposed employees, and revise existing procedures to prevent future incidents.

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Training

All employers covered by the ATD Standard must provide comprehensive training to employees on their initial placement and at least annually. Employers must also provide a training update to employees regarding changes to their ATD exposure control plan that apply to 2019-nCoV. This update must specifically address:

- Signs and symptoms of 2019-nCoV.
- Modes of transmission of 2019-nCoV and source control procedures.
- Tasks and activities that may expose the employee to 2019-nCoV.
- Use and limitations of methods to prevent or reduce exposure to 2019-nCoV including appropriate engineering and work practice controls, decontamination and disinfection procedures, and personal and respiratory protective equipment.
- Selection of personal protective equipment, its uses and limitations, and the types, proper use, location, removal, handling, cleaning, decontamination and disposal.
- Proper use of respirators.
- Available vaccines, when they become available.
- What to do if an exposure incident occurs.
- The employer's surge plan if applicable.

A more complete discussion of ATD training requirements is available in [The California Workplace Guide to Aerosol Transmissible Diseases](#).

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Engineering and Work Practice Controls

Employers must use feasible engineering and work practice controls to minimize employee exposures to airborne infectious disease. Examples of engineering controls include airborne infection isolation rooms or areas, exhaust ventilation, air filtration, and air disinfection. Work practice controls include procedures for safely moving patients through the operation or facility, handwashing, personal protective equipment (PPE) donning and doffing procedures, the use of anterooms, as well as cleaning and disinfecting contaminated surfaces, PPE, articles, and linens.

Covered employers must identify suspected cases, provide patients with disposable tissues and hand hygiene materials, and ensure patients are masked or placed in a manner that eliminates or minimizes contact with employees who are not wearing respiratory protection until the patient is moved to an airborne infection isolation room or area. Employers must ensure that patients are moved to an airborne infection isolation room or area in a timely manner. If an airborne infection isolation room is not available, the employer must arrange for a transfer or contact the local health officer for assistance.

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Personal Protective Equipment

Employers must provide and ensure employees use personal protective equipment (PPE), where necessary to control exposure when employees:

- Enter or work in an airborne isolation room or area with a case or suspected case.
- Are present during procedures or services on a case or suspected case.
- Repair, replace or maintain air systems or equipment that may contain pathogens.
- Decontaminate an area that is or was occupied by a case or suspected case.
- Are present during aerosol generating procedures on cadavers of cases or suspected cases.
- Transport a case or suspected case within a facility or within a vehicle when the patient is not masked.
- Are working with viable virus in the laboratory.

With some exceptions, employers must provide a powered air-purifying respirator (PAPR) with high efficiency particulate air filters to employees who perform high hazard procedures on 2019-nCoV cases or suspected cases. Such procedures include but are not limited to intubation, caring for patients on positive-pressure ventilation, and suctioning of the airway. Emergency medical services employees can use N100, R100, or P100 respirators instead of PAPRs.

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Medical Services

Covered employers must provide employees with medical services in accordance with applicable public health guidelines (for example from CDC or CDPH), for the type of work setting and disease. This includes investigation of exposure incidents and, where necessary, provisions for precautionary medical removal of employees who may have been infected. Please see section 5199(h) for details.

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Laboratory Operation Requirements

Laboratory operations capable of aerosolizing infectious pathogens must have a biosafety plan and a qualified biosafety officer. Additionally, employers with laboratory operations in which employees have direct contact with cases or suspected cases must comply with all other applicable parts of the ATD Standard.

Laboratories handling 2019-nCoV pathogens or suspect pathogens must follow the [CDC Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with 2019 Novel Coronavirus \(2019-nCoV\)](#), which includes, but is not limited to the following:

- Wear appropriate personal protective equipment including disposable gloves, laboratory coat/gown, respiratory, and eye protection.
- Perform procedures that may generate fine-particulate aerosols (e.g., vortexing or sonication of specimens in an open tube) in a Class II Biological Safety Cabinet (see title 8 [section 5154.2](#) for further information on biological safety cabinets).
- Use appropriate physical containment devices (e.g., centrifuge safety buckets; sealed rotors) for centrifugation.
- Use work practices that minimize the risk of exposure for procedures done outside a biological safety cabinet.
- Decontaminate work surfaces and equipment with appropriate disinfectants after specimens are processed.
- Autoclave disposable waste.

Virus isolation in cell culture and initial characterization of viral agents recovered in cultures of 2019-nCoV specimens are NOT recommended at this time, except at a biosafety level 3 facility.

See the CDC & CDPH guidelines below for more specific guidance.

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Resources

- Infection Control Recommendations
 - [CDC Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with 2019 Novel Coronavirus \(2019-nCoV\)](#) – U.S. Centers for Disease Control and Prevention (CDC)
 - [Interim Healthcare Infection Prevention and Control Recommendations for Patients Under Investigation for 2019 Novel Coronavirus](#) – U.S. Centers for Disease Control and Prevention (CDC)
 - California Department of Public Health letters:
 - [All Facilities Letter 20-09, Health Update and Interim Guidance – 2019 Novel Coronavirus \(nCoV\), January 23, 2020](#)
 - [All Facilities Letter 20-10, Healthcare Facility Resources for the 2019 Novel Coronavirus \(2019-nCoV\), January 27, 2020](#)
 - [All Facilities Letter 20-11, Updated 2019 Novel Coronavirus Information \(2019-nCoV\), Including Patient Under Investigation \(PUI\) Guidance from the Centers for Disease Control and Prevention \(CDC\), January 31, 2020](#)
- For more information about the requirements of the Cal/OSHA ATD Standard, see [The California Workplace Guide to Aerosol Transmissible Diseases](#).
- [CDC Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with 2019 Novel Coronavirus \(2019-nCoV\)](#).

- [CDC webpage on 2019 Novel Coronavirus.](#)
- [CDPH webpage on Novel Coronavirus 2019.](#)
- [Federal OSHA webpage on 2019 Novel Coronavirus.](#)
- [World Health Organization webpage on Novel 2019 Coronavirus.](#)