



March 3, 2020

Cal/OSHA Interim Guidance on Coronavirus for Health Care Facilities: Efficient Use of Respirator Supplies

Note: This Interim Guidance is Subject to Change as the Situation Evolves

For requirements and information on protecting health care employees from COVID-19, please see [Interim Guidance for Protecting Health Care Workers from Exposure to 2019 Novel Coronavirus](#) and the Cal/OSHA Aerosol Transmissible Diseases Standard ([title 8 section 5199](#)).

Respiratory Protection is Mandatory to Protect Health Care Employees from Airborne Infectious Diseases and Novel Pathogens

Airborne infectious diseases expose health care workers to pathogens in the course of their work. It is important that employers prevent harmful exposures to protect the workers, their families and their communities. Therefore, employers must provide appropriate respiratory protection at all times when other controls do not eliminate employee exposures to airborne infectious diseases. Under Cal/OSHA's Aerosol Transmissible Diseases (ATD) Standard ([title 8 section 5199](#)) a novel virus such as the coronavirus (SARS-CoV-2), the virus that causes COVID-19, is considered an airborne infectious disease and control measures such as the use of airborne infection isolation and respiratory protection are required.

WARNING: Surgical and other non-respirator face masks do not protect persons from airborne infectious disease and cannot be relied upon for novel pathogens. They do not prevent inhalation of virus particles because they do not seal to the person's face and are not tested to the filtration efficiencies of respirators. Surgical and face masks must not be used instead of an approved respirator such as an N95 mask.

Respirator Supply Issues

Employers at health care facilities should take appropriate measures to maximize respirator supplies and reduce the need for respirator use when there is an increased demand for respirators due to the diagnosis and treatment of novel pathogens.

Supplies of disposable N95 filtering facepiece respirators can become depleted during influenza pandemics, widespread outbreaks of other infectious respiratory illnesses or when otherwise in high demand. Health care facilities should plan to stockpile respirators and conservatively utilize their supplies while properly protecting their employees from exposure.

State and local public health departments can help provide respirators to health care facilities who have low inventories and experience difficulty in getting orders filled, however supplies may be limited or the supply chain may be interrupted.

Use of Engineering and Administrative Controls

The ATD Standard requires that employers use feasible engineering and administrative controls to protect employees from airborne infectious diseases (as listed in [Appendix A of title 8 section 5199](#)). These controls are required to protect employees from COVID-19 and can also help employers conserve their respirator supply as follows:

- Use engineering controls to limit the number of employees who are in contact with COVID-19 patients to reduce the need for respirators
 - Isolate known or suspected COVID-19 cases in airborne infection isolation rooms or areas where feasible, so that only employees who enter these areas need respiratory protection (5199(e)(5)(B)).
 - Conduct high-hazard procedures in airborne infection isolation rooms or areas and exclude all non-necessary persons from the area. Everyone in the area where the procedure is being performed must use respirators and other personal protective equipment (5199(e)(5)(B)).
 - Use airtight barriers such as windows to eliminate worker exposures to airborne infectious diseases where possible.

Non-airtight barriers are also a required engineering control where feasible such as in reception areas, information booths, emergency department intake booths, triage stations and pharmacy drop-off/pick-up windows. These barriers do not remove the need for respirators, but reduce the risk of transmission through control of other exposure routes.

- Limit the movement of suspected and confirmed COVID-19 cases within a facility. When any of these patients are transported within a facility or between facilities, a surgical mask should be used to cover their mouth and nose. Employees must use respirators if the patient is unable to utilize a face mask, is not fully compliant with mask use, or if care provided during transport exposes employees to aerosols from the patient (5199(g)(4)(H)).
- Use administrative controls to limit the number of employees exposed to COVID-19 suspected and confirmed cases
 - Prevent workers who do not provide direct patient care from entering airborne infection isolation rooms or areas with a suspected or confirmed COVID-19 case or where high-hazard procedures are performed. Any employee who enters an airborne infection isolation room or area with a suspected or confirmed COVID-19 case must wear a respirator.
 - Prevent workers from entering a vacated airborne infection isolation room or area until after it has been ventilated according to Table 1 in the [Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings](#) for a removal efficiency of 99.9%. Any employee who enters an airborne infection isolation room or area before proper ventilation is completed must wear a respirator.

- Screen and postpone visits from patients for elective appointments or procedures who have non-urgent and non-serious acute respiratory illness until after the cessation of acute respiratory symptoms when possible.
- Bundle or combine care activities to minimize room entries (e.g., food trays delivered by health care workers performing other care).
- Use alternative methods for health care worker and patient means of communication such as telephones and video calls when possible.
- Prevent direct visitor contact with suspected or confirmed COVID-19 cases.

Respiratory Protection Policy: Methods for Efficient Use of Existing Respirator Supply

Any decision to change a facility's respiratory protection policy should be made by the professionals who manage the institution's respiratory protection program, in consultation with their occupational health and infection prevention department and in compliance with public health guidelines. Such policies may enable employers to extend their existing respirator supply through the following measures:

- **Use of non-disposable respirators instead of filtering facepiece respirators**

Elastomeric half-mask, full-facepiece and powered air-purifying respirators (PAPRs) can be disinfected and re-used multiple times.¹ The respirator filters need to be replaced periodically, but have a much longer expected lifetime than a filtering facepiece respirator. Elastomeric respirators should not be used in the sterile field due to concerns that air coming out of the exhalation valve may contaminate the field.

PAPRs with high-efficiency particulate air filters are required (with limited exceptions) for employees who perform high hazard procedures on patients with an airborne infectious disease or novel pathogen such as COVID-19 (5199(g)(3)(B)).

- **Extended use of filtering facepiece respirators**

Extended use of a respirator occurs when a health care worker keeps the same respirator on during encounters with several patients without removing the respirator between patient encounters. Extended use is normally practiced when multiple patients are infected with the same respiratory pathogen and patients are placed together in dedicated areas (cohorting).

Employers must establish procedures and provide effective training to ensure that the respirators are kept clean, sanitary, and in good working order at all times.

Respirators must be discarded if:

- Contaminated with a hazardous substance, blood or bodily fluids
- After use during an aerosol-generating procedure or surgery
- Wet or visibly dirty

- An effective seal to the user's face cannot be formed
- Breathing with the respirator becomes difficult after extended use

- **Reuse of filtering facepiece respirators**

Reuse of a respirator occurs when a health care worker uses the same respirator for multiple encounters with either the same or different patients, but removes the respirator after each encounter. The respirator is safely stored after each encounter and put on again before the next patient encounter. A cleanable face shield must be used simultaneously to reduce respirator contamination. **Placing a surgical mask over a respirator is prohibited.**

Reuse of respirators is normally practiced only for pathogens that do not have contact precautions, such as tuberculosis.

WARNING: Public health agencies have recommended contact precautions for COVID-19, so reuse is not appropriate for health care workers providing treatment to suspect or confirmed COVID-19 cases.

In order to extend the respirator supply, employers may choose to reuse filtering facepiece respirators when caring for patients with illnesses other than COVID-19 that do not require contact precautions. Employers must establish procedures and provide effective training to ensure filtering facepiece respirators are reused properly.

- Employees must perform a user seal check every time a respirator is put on.
- Respirators must be:
 - Kept clean, sanitary and in good working order at all times.
 - Protected during storage from damage or deformation, contamination, dust, sunlight, extreme temperatures, excessive moisture and damaging chemicals.
 - Inspected prior to putting them on after storage for proper function, tightness of connections, and the condition of the facepiece, straps and valves.
 - Used by one employee only, never shared.
 - Discarded if contaminated with a hazardous substance, blood, bodily fluids, after use during an aerosol-generating procedure or surgery, become wet or visibly dirty, no longer form an effective seal to the user's face, or when breathing becomes difficult.

- **Use of filtering facepiece respirators after their expiration date**

Although it may be possible to use certain N95 respirators past their expiration date, some expired respirators may not provide the protection for which they were certified. Components such as the strap and filtering material may degrade over time.

To ensure non-expired respirators are used in higher-risk encounters as much as possible, the following priority should be followed.

- Primary care physicians and other referring employers with limited exposure to suspected or confirmed COVID-19 patients should use expired respirators as needed to conserve respirator supplies.
- Health care facilities with employees that provide care to suspected or confirmed COVID-19 patients must exhaust other available respiratory protection options before using expired respirators. PAPRs that need to be reserved to ensure an adequate supply for high hazard procedures are not considered available for other uses.

WARNING: Expired respirators cannot be used in surgical settings.

In addition, all employers must comply with the following requirements before permitting the use of expired N95 respirators to ensure proper protection:

- Ensure the expired respirators and all their components are visually inspected to confirm proper condition before use.
- Ensure the expired respirators were stored in accordance with the manufacturer-recommended conditions.
- Ensure the expired respirator is listed by NIOSH as providing the expected level of protection to the user. See [Release of Stockpile N95 Filtering Facepiece Respirators Beyond the Manufacturer-Designated Shelf Life: Consideration for the COVID-19 Response](#). The list as of March 2, 2020 includes the following respirators:
 - 3M 1860
 - 3M 1860S
 - 3M 1870
 - 3M 8210
 - 3M 9010
 - Gerson 1730
 - Medline/Alpha Protech NON27501
 - Moldex 1512
 - Moldex 2201

The 3M 8000 respirator is no longer in production and should not be used because it has a low fit-testing success rate.

Additional Resources

- National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. [Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare Settings](#)
- National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. [Release of Stockpile N95 Filtering Facepiece Respirators Beyond the Manufacturer-Designated Shelf Life: Consideration for the COVID-19 Response.](#)
- Centers for Disease Control and Prevention. [Strategies for Optimizing the Supply of N95 Respirators](#)
- California Department of Public Health. [Implementing Respiratory Protection Programs in Hospitals: A Guide for Respirator Program Administrators](#)
- California Department of Public Health. [Respirator Use in Health Care – a Toolkit for Program Administrators](#)
- California Department of Public Health. [Respirator Selection Guide for Aerosol Transmissible Diseases](#)
- California Department of Public Health. [Cal/OSHA's Aerosol Transmissible Disease Standards and Local Health Departments](#)
- OSHA. [Hospital Respiratory Protection Program Toolkit: Resources for Respirator Program Administrators](#)
- Cal/OSHA. [The California Workplace Guide to Aerosol Transmissible Diseases](#)
- Cal/OSHA. [Respiratory Protection Factsheet](#)
- Cal/OSHA. [Respiratory Protection in the Workplace: A Practical Guide for Small-Business Employers](#)
- Cal/OSHA. [Interim Guidance for Protecting Health Care Workers from Exposure to 2019 Novel Coronavirus](#)
- Cal/OSHA. Aerosol Transmissible Diseases Standard, [title 8 section 5199](#)

ⁱ Bessesen MT et al. Disinfection of reusable elastomeric respirators by health care workers: A feasibility study and development of standard operating procedures. American Journal of Infection Control. June 2015. <https://www.sciencedirect.com/science/article/pii/S0196655315000899>