



STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

Q&A: Guidance for Protecting Workers at Healthcare Facilities During the 2009 H1N1 Influenza Pandemic

What are the current CDC and OSHA recommendations for healthcare worker protection from 2009 H1N1 influenza?

Worker protection from any hazard, including the 2009 H1N1 influenza virus, is best achieved through the use of a combination of several control measures. The most effective measures for protecting workers from hazards include screening and identification of potentially infected individuals and the use of engineering and administrative (work practice) controls. Engineering controls include such things as physical barriers between workers and potentially infected individuals, while administrative controls might include excluding workers at high-risk for complicated infection from direct patient care, promoting cough etiquette and hand hygiene, and vaccinating healthcare personnel. The use of engineering and administrative controls as a first line of defense in protecting healthcare workers during the 2009 H1N1 influenza pandemic is a significant component of the CDC's [Interim Guidance on Infection Control Measures for 2009 H1N1 Influenza in Healthcare Settings, Including Protection of Healthcare Personnel](#).

In addition to engineering and administrative controls, the use of Personal Protective Equipment (PPE), including N95 respirators, is also indicated during direct care of known or suspected H1N1 infected patients and certain other exposures. As mentioned previously, CDC and OSHA continue to recommend the use of respiratory protection that is at least as protective as *a fit-tested disposable N95 respirator* for healthcare personnel who are in close contact with patients with suspected or confirmed 2009 H1N1 influenza. If used correctly, N95 respirators can help prevent some exposures; however, they should not take the place of other prevention controls. It is important that N95 respirators be:

- Selected and used based upon the likelihood of the employee coming into contact with H1N1 infected individuals;
- Properly fitted, and some must be periodically refitted;
- Conscientiously and properly worn;
- Regularly maintained and replaced, as necessary;
- Properly removed and disposed of to avoid contamination of self or others;
- Used in conjunction with an OSHA-compliant respiratory protection program.

More information regarding the appropriate selection and use of PPE, including the requirements of an OSHA-compliant respiratory protection program for workers using respirators (including N95 filtering facepiece respirators), can be found on the [OSHA Respiratory Protection website](#).

What should healthcare facilities do if they don't have enough respirators for all of their patient care personnel?

CDC has acknowledged that the large gap between N95 respirator supply and demand that is predicted to occur during the 2009 H1N1 influenza pandemic may affect a healthcare facility's ability to provide N95 respirators to all of its personnel with direct patient care responsibilities on an ongoing basis. CDC recommends that hospitals and other healthcare facilities take special care to ensure that respirators are available for situations where respiratory protection is most important, such as performance of aerosol-generating procedures on patients with suspected or confirmed 2009 H1N1 influenza or provision of care to patients with other infections for which respiratory protection is strongly indicated (e.g., tuberculosis). In cases where a respirator shortage exists at a particular healthcare facility, CDC recommends that those facilities shift to a *prioritized respirator use mode*, where respirator use may be *temporarily* discontinued in favor of surgical masks for droplet precautions for employees at lower risk of exposure to the 2009 H1N1 influenza virus or at lower risk of complicated infection. Even in a prioritized use situation, respirators should continue to be used by personnel attending aerosol-generating procedures on patients with confirmed or suspected H1N1 infection or managing patients with diseases other than influenza that require respiratory protection (e.g., tuberculosis patients).

The [CDC Interim Guidance](#) document includes some guidance to assist hospitals and other healthcare facilities in determining whether or not a respirator shortage exists at their facilities that would warrant prioritized use. A more specific tool designed to assist hospitals and other healthcare facilities in determining the adequacy of their current respirator inventory, as well as their future estimated need, has been developed and distributed by the Minnesota Department of Health and is available [on their website](#).

Will OSHA cite and fine healthcare facilities for not providing their patient care personnel with respirators?

On November 20, 2009, OSHA issued a [Compliance Directive](#) for the protection of frontline health care and emergency medical workers at high risk of 2009 H1N1 infection through contact with patients or contaminated material in a healthcare or clinical laboratory setting. The purpose of this directive was to establish uniform agency enforcement policies and to provide instructions for use by OSHA inspectors responding to complaints. OSHA's expectation is that healthcare facilities will use the CDC Interim Guidance in protecting their personnel from infection during the 2009 H1N1 influenza pandemic, and their directive closely follows that guidance. OSHA has developed [several fact sheets](#) designed to assist employers in protecting workers during the 2009 H1N1 influenza outbreak, including fact sheets for [protecting healthcare personnel](#).

As part of its compliance directive, OSHA has instructed inspectors to evaluate whether healthcare workers who are expected to perform *very high and high risk* exposure tasks are using respirators that are at least as protective as a fit-tested disposable N95 filtering facepiece respirator. OSHA's definition of tasks with *high* occupational exposure risk to 2009 H1N1 influenza include: entering rooms with suspected or confirmed 2009 H1N1 influenza patients, attending to suspected or confirmed 2009 H1N1 influenza patients through close contact (within 6 feet), or transporting suspected or confirmed 2009 H1N1 influenza patients in enclosed

vehicles. Tasks which subject workers to *very high* occupational exposure risks to the 2009 H1N1 influenza include the performance of very high exposure risk aerosol-generating procedures, such as bronchoscopy, sputum induction, endotracheal intubation and extubation, open suctioning of airways, cardiopulmonary resuscitation and autopsies where higher concentrations of respiratory aerosols are expected to be generated.

OSHA has also acknowledged the likelihood of N95 respirator supply shortages during this time. [OSHA has stated](#) repeatedly that, “where respirators are not commercially available, an employer [in this case, a healthcare facility] will be considered to be in compliance [with OSHA standards] if the employer can show that a good faith effort has been made to acquire respirators.” As part of their directive, OSHA also expects that, in addition to the use of respirators, employers will implement a hierarchy of controls such as feasible engineering controls, administrative controls, and encourage vaccination and other work practices recommended by CDC.

OSHA has also confirmed its support of *prioritized respirator use* by healthcare facilities, while also recommending that employers continue to monitor their supply of respirators to determine when to begin prioritized respirator use and when supplies are sufficient enough so that prioritized use can be discontinued. OSHA has directed its compliance inspectors to issue a citation for the failure to provide a respirator at least as effective as an N95 respirator to employees providing care in close-contact (within 6 feet) of suspected or confirmed 2009 H1N1 influenza patients, *unless* the employer can establish *all* of the following:

- There is a shortage of respirators that are at least as effective as an N95 respirators or better;
- The employer made a good faith effort to obtain other alternative respirators such as N99, N100 or reusable elastomeric respirators;
- The employer made an effort to monitor their supply of N95s and to prioritize their use according to CDC guidance;
- Surgical masks and eye protection devices were provided as an interim measure to protect against splashes and large droplets (Note: surgical masks are NOT respirators and do not provide protection against aerosol-generating procedures); and
- Other measures were instituted to protect employees, for example, use of partitions or other engineering controls that might reduce the need for PPE or reducing exposure through cohorting patients.

How was the CDC and OSHA guidance affected by the withdrawal of study findings by Australian researchers that originally showed respirators to be more protective against respiratory virus infection, including influenza, than surgical masks?

CDC and OSHA have based their recommendations in part on the findings from an Institute of Medicine (IOM) panel review of the relevant scientific information regarding the relative effectiveness of surgical masks and N95 respirators in protecting against H1N1 infection. One such study that showed N95 respirators to be significantly more effective than surgical masks for protecting healthcare workers from respiratory virus infection was originally presented by The University of New South Wales (Australia) group (MacIntyre and colleagues) at the Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) meeting in September. The results of that study were subsequently withdrawn by the authors when it was determined that their analysis may have been flawed and that no significant effect could be discerned from this

study. However, the IOM panel [explicitly stated](#) that it did not rely on this study in issuing its recommendations, nor is the IOM Report or this study mentioned in the CDC Interim Guidance. In presenting the results of the IOM report to the sponsors of the review, CDC and OSHA, the panel chair made a point of specifically saying that the two recently conducted randomized trials of respirator use, the MacIntyre study and another by Loeb and colleagues, were not considered in the panel's decision.

What is the Department of Public Health's position on the current CDC and OSHA guidance for healthcare worker protection from 2009 H1N1 influenza?

The Connecticut Department of Public Health considers the federal agency guidance currently in place for the protection of healthcare personnel, including the use of respiratory protection that is at least as protective as a fit-tested disposable N95 respirator for healthcare personnel who are in close contact with patients with suspected or confirmed 2009 H1N1 influenza, to be based on currently recognized best practices for worker protection. As such, the Department continues to recommend that employers, including healthcare facilities, develop and maintain plans and policies for worker protection from 2009 H1N1 influenza that follow these federal guidelines. In addition, the Department always recommends that employers adhere to all applicable OSHA standards and guidelines for worker protection from known or suspected hazards, including instituting an OSHA-compliant respiratory protection program in situations where their personnel are utilizing N95 respirators for protection against respiratory hazards. The Department also recognizes that conditions surrounding the 2009 H1N1 influenza pandemic are continuously evolving and that new information is constantly being put forward by the scientific community. The Department continues to monitor this evolving situation and to consider all scientifically relevant information and will revise its guidance for healthcare worker protection in the event that the Department thinks that new or revised guidelines or other information warrants such a revision.

Who can I contact if I need more information about protecting healthcare workers during the 2009 H1N1 influenza pandemic?

Specific information about CDC and OSHA recommendations for healthcare worker protection from 2009 H1N1 influenza infection, including guidance documents, directives, and other materials can be found on both the [CDC](#) and [OSHA](#) websites. For more information or questions about the content of this document, please contact Tom St. Louis, Occupational Health Unit Supervisor at the Connecticut Department of Public Health at thomas.st.louis@ct.gov or by telephone at (860) 509-7740.