

IOM RECOMMENDS N95 RESPIRATORS TO PROTECT HEALTH CARE WORKERS FROM H1N1 FLU - CAUTIONS AGAINST RELIANCE ON A SINGLE STRATEGY TO CONTROL INFECTION

WASHINGTON -- Health care workers who interact with patients suspected or confirmed to be infected with novel H1N1 influenza A -- the new strain of pandemic flu -- should wear fitted N95 respirators, which filter better than looser medical masks, to help guard against respiratory infection by the virus, says a new report from the Institute of Medicine. The report endorses the current U.S. Centers for Disease Control and Prevention guidelines for respiratory protection against this novel flu virus, also commonly referred to as swine flu. However, wearing N95 respirators should be only one element of workers' and health care organizations' infection control strategies, stressed the committee that wrote the report.

While the CDC guidelines and the report's recommendations are based on the best available information and evidence, scientists do not know to what extent flu viruses spread through the air or whether infection requires physical contact with contaminated fluids or surfaces. The report calls for a boost in research to answer these questions and to design and develop better protective equipment that would enhance workers' comfort, safety, and ability to do their jobs.

"Based on what we currently know about influenza, well-fitted N95 respirators offer health care workers the best protection against inhalation of viral particles," said committee chair Kenneth Shine, executive vice chancellor for health affairs, University of Texas System, Austin, and former president of the Institute of Medicine. "But there is a lot we still don't know about these viruses, and it would be a mistake for anyone to rely on respirators alone as some sort of magic shield. Health care organizations and their employees should establish and practice a number of strategies to guard against infection, such as innovative triage processes, hand washing, disinfection, gloves, vaccination, and antiviral drug use."

In the event that the new pandemic virus creates a surge of patients during the upcoming flu season, it will be critical to protect health care workers from infection given their central role in treating sick people and lessening the pandemic's overall impact.

The Institute of Medicine was asked to evaluate personal protective equipment designed to guard against respiratory infection specifically, and therefore the committee focused on the efficacy of medical masks and respirators. Studies have shown that inhalation of airborne viruses is a likely route of flu infection, supporting the use of respiratory protection during an outbreak even though it is not clear whether airborne transmission is the sole or main way the disease spreads.

N95 respirators and medical masks cover the nose and mouth. Although similar in appearance, medical masks fit loosely on wearers' faces, and respirators are designed to form a tight seal against the wearer's skin. If properly fitted and worn correctly, N95 respirators filter out at least 95 percent of particles as small as 0.3 micrometers, which is smaller than influenza viruses, the report notes.

Given the short time frame of this study, the committee was not asked to discuss issues associated with implementing its recommendations, such as costs and supplies, or to assess the impact of other infection control measures, such as vaccination or prophylactic use of antiviral drugs. However, the committee underscored the importance of using a range of infection control strategies to minimize the chances for exposure and infection for health care workers.

The study was sponsored by the CDC and Occupational Safety and Health Administration. Established in 1970 under the charter of the National Academy of Sciences, the Institute of Medicine provides independent, objective, evidence-based advice to policymakers, health professionals, the private sector, and the public. The National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council make up the National Academies. A committee roster follows.

Copies of [RESPIRATORY PROTECTION FOR HEALTHCARE WORKERS IN THE WORKPLACE AGAINST NOVEL H1N1 INFLUENZA A](#) are available from the National Academies Press; tel. 202-334-3313 or 1-800-624-6242 or on the Internet at [HTTP://WWW.NAP.EDU](http://www.nap.edu). Reporters may obtain a copy from the Office of News and Public Information (contacts listed above).

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