Medical Xpress

Study finds face masks and hand hygiene can help limit influenza's spread

January 21 2010

Ordinary face masks and hand hygiene can effectively reduce the transmission of influenza-like illness during flu season. The finding comes from a new study, now available online, published in the Feb. 15 issue of the *Journal of Infectious Diseases*. In an influenza pandemic, vaccination may not be initially available, and antiviral prescribing may be limited, which is why scientists need to understand how effective other measures are in preventing influenza.

For the study, researchers from the University of Michigan School of Public Health, led by Allison E. Aiello, PhD, recruited more than 1,400 college students living in university residence halls during the 2006-2007 influenza season. Participants were assigned to one of three groups: those who wore face masks, those who wore masks and used alcohol-based hand sanitizer, or a control group who received no intervention. Students were monitored for influenza-like symptoms for six weeks. All participants viewed a basic hand hygiene instructional video. Subjects in the hand hygiene and mask group were given an alcohol-based hand sanitizer and written instructions regarding proper face mask and hand sanitizer use. Those in the mask group received written instructions on face mask use only. The students began using the measures just after laboratory confirmation of influenza on the University of Michigan campus had been made.

The investigators observed significant reductions in the incidence of influenza-like symptoms starting after three weeks in the hand sanitizer/mask group and in the mask group compared with the control

group. In the hand sanitizer/mask group, Dr. Aiello and researchers found a reduction of influenza-like symptoms ranging from 35 to 51 percent when compared with the control group. The incidence of symptoms between the hand sanitizer/mask group and the mask-only group were not statistically different, suggesting that the use of hand sanitizer did not substantially contribute to reducing symptoms.

The findings "have implications for guidelines and recommendations for mask use in the community setting," the authors wrote. Mask use during this study was proven to have a protective effect even when worn moderately during the day. Additionally, the use of face masks and hand hygiene may reduce respiratory illnesses in community settings and lessen the impact of the H1N1 pandemic, the authors noted.

An accompanying editorial agreed with the researchers and suggested that use of a face mask and hand hygiene can be effective in reducing transmission of influenza and influenza-like illness. The editorial's lead author, Titus Daniels, MD, MPH, of Vanderbilt University, pointed out that the Centers for Disease Control and Prevention (CDC) currently recommends the use of a face mask only for individuals at increased risk for influenza or where H1N1 is circulating in the community setting. "These data can inform policymakers on the recommendations for mask use in the community and perhaps other settings," such as health care institutions, the editorial said.

More information:
http://www.journals.uchicago.edu/doi/abs/10.1086/650396

Provided by Infectious Diseases Society of America