SEASONAL FLU VACCINE MAY BLUNT H1N1 SEVERITY

WASHINGTON — The 2008 seasonal flu vaccine showed an overall vaccine efficacy of 45% against infection with the pandemic influenza A(H1N1) virus in a study of military personnel conducted between March 2009 and May 2009, according to findings presented at the annual meeting of the American Society of Tropical Medicine and Hygiene.

This rate of vaccine effectiveness means that those vaccinated have a 45% lower chance of developing an infection, Dr. Jose Sanchez of the Armed Forces Health Surveillance Center in Silver Spring, Md., said in an interview. The confidence interval for the overall 45% vaccine effectiveness rate was 33%-55%.

Surprisingly, the greatest effectiveness was seen among individuals aged 17-24 years and in those aged 40 years and older. Dr. Sanchez said. Dr. Sanchez and colleagues conducted a case-control study of flu-related medical visits by active duty members of the U.S. military, compared with a control group of military individuals who presented with acute, nonvaccine-related illnesses.

The study included 1,001 cases of H1N1 influenza and approximately four controls for each case.

In this military population, the live attenuated influenza vaccine (LAIV) and the trivalent inactivated vaccine (TIV) showed effectiveness of 22% and 35%, respectively. The effects of both types were significant, although the effectiveness of the LAIV just reached significance, Dr. Sanchez noted.

A total of 78 of the 1,205 H1N1 patients (6.5%) required hospitalization. The seasonal flu vaccine appeared to offer more protection against severe H1N1 disease, Dr. Sanchez said. The efficacy of the seasonal flu vaccination was 62% among hospitalized patients, compared with 42% among outpatients.

Dr. Sanchez cited four previous studies of the impact of seasonal flu vaccine on H1N1 infection. Data from two studies suggested a protective effect, while data from two others, including a study from the Centers for Disease Control and Prevention, did not. “The increasing momentum of the H1N1 pandemic underscores the need for vaccine, yet there is a wide variance in vaccine effectiveness depending on the strain-match for a particular season,” Dr. Sanchez said in a statement.

The U.S. military is a highly immunized population, and the results may not be applicable to civilian populations, Dr. Sanchez said. In addition, he suggested that a combination of natural influenza infections and prior immunizations may have diminished the vaccine's effect.

Dr. Sanchez recommended continued vaccine efforts and ongoing influenza surveillance to track the H1N1 strain and its variants.