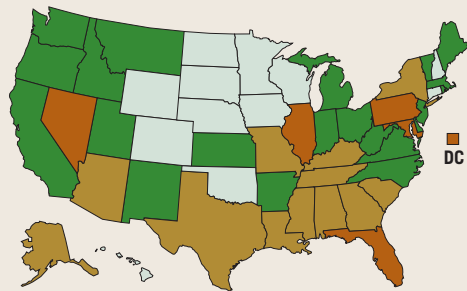
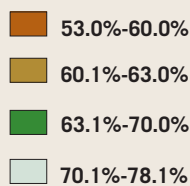


## DATA WATCH

## Percentage of Elderly Who Received an Influenza Vaccine in the Last Year



Note: Based on 2005 estimated data from the Behavioral Risk Factor Surveillance System on adults aged 65 years and older who received an influenza vaccine during the preceding 12 months.  
Source: Centers for Disease Control and Prevention

ELSEVIER GLOBAL MEDICAL NEWS

## Mortality in the Elderly Not Decreased by Flu Shots

BY HEIDI SPLETE  
Senior Writer

Influenza vaccinations don't reduce flu-related mortality in elderly adults in the United States, and prior reports of the vaccine's efficacy in this population have been exaggerated, according to a recent report.

Although flu vaccination rates in the

United States have increased from 15% to 65% since 1980, recent mortality studies cannot confirm any decrease in flu-related deaths in adults aged 70 years and older, wrote Lone Simonsen, Ph.D., of George Washington University, Washington, and colleagues (*Lancet Infect. Dis.* 2007;7:656-66 [Epub doi:10.1016/S1473-3099(07)70236-0]).

To assess the validity of the evidence for and against flu shots for the elderly, the researchers reviewed data from previous studies and found few randomized, controlled trials of flu vaccination effectiveness in the elderly. Most of the current evidence stems from observational studies that compared mortality in vaccinated vs. unvaccinated persons. In addition, studies of flu vaccination and flu-related mortality in the elderly likely are affected by selection bias and don't account for frailty, the researchers explained.

The review included all available clinical studies of vaccine effectiveness in elderly persons. Of note, data from the largest and most rigorous placebo-controlled randomized study (which is often cited as evidence of vaccine effectiveness) showed that the flu vaccine's effectiveness may decline with age.

The study, which included 1,838 healthy adults aged 60 and older, cites a 50% vaccine efficacy among adults aged 60 and older, the researchers noted (*JAMA* 1994;272:1661-5). But vaccine efficacy was only 23% among adults aged 70 years and older, compared with 57% among persons aged 60-69 years.

The decline in flu vaccine benefits is consistent with evidence of a decline in overall immune responsiveness later in life. The researchers cited data from a review of placebo-controlled antibody responses showing that responses of older persons receiving the vaccinations were one-quarter to one-half as vigorous as responses in younger adults, although data are limited for persons aged 70 years and older (*Vaccine* 2005;24:1159-69).

Pending further evidence, flu vaccinations for the elderly are useful because three-quarters of influenza deaths per year are in persons over age 70, and even a partly effective vaccine is better than no vaccine, they concluded.

In another report, Dr. Tom Jefferson and Dr. Carlo Di Pietrantonj wrote that data from Cochrane Reviews published in 2005 and 2006 supported the presence of a selection bias and the subsequent weak evidence for the effectiveness of flu vaccination to prevent mortality in adults aged 65 years and older. Dr. Jefferson and Dr. Di Pietrantonj, members of the Cochrane Vaccines Field in Alessandria, Italy, contributed to the 2005 and 2006 Cochrane Reviews, which showed that flu vaccines significantly reduced all-cause mortality—but not flu-specific mortality—in older people. "We concluded that the most probable explanation for such contradictory findings was selection bias, which occurred when not-so-frail elderly people were more likely to be vaccinated than their infirm peers, thus affecting the outcome," they wrote (*Lancet* 2007 [Epub doi:10.1016/S0140-6736(07)61389-0]). ■

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