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Influenza Vaccination—Is It Cost-Effective?

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Although the cost-effectiveness and cost-benefit of influenza vaccination are well established for persons aged 65 years or older, the benefits for healthy adults younger than 65 years are less clear. To evaluate the effectiveness and cost-benefit of influenza vaccine in preventing influenza-like illness (ILI) and reducing societal costs of ILI among healthy working adults, Bridges and colleagues conducted a randomized, placebo-controlled trial during two influenza seasons. The study included healthy adults aged 18 to 64 years and employed full-time by a US manufacturing company (for 1997/98 season, n=1,184; for 1998/99 season, n=1,191).

For each season, participants were

randomly assigned to receive either trivalent inactivated influenza vaccine (n=595 in 1997/98 and n=587 in 1998/99) or sterile saline injection (placebo; n=589 in 1997/98 and n=604 in 1998/99). Participants in 1997/98 were rerandomized if they participated in 1998/99.

For 1997/98 and 1998/99, respectively, 95% (1,130/1,184) and 99% (1,178/1,191) of participants had complete follow-up, and 23% in each year had serological testing. In 1997/98, when the vaccine virus differed from the predominant circulating viruses, vaccine efficacy against serologically confirmed influenza illness was 50% (P=.33). In this season, vaccination did not reduce ILI, physician visits, or lost workdays; the net societal cost was \$65.59 per person compared with no vaccination. In 1998/99, the vaccine and predominant circulating viruses were well-

matched. Vaccine efficacy was 86% (P=.001), and vaccination reduced ILI, physician visits, and lost workdays by 34%, 42%, and 32%, respectively. However, vaccination resulted in a net societal cost of \$11.17 per person compared with no vaccination.

Influenza vaccination of healthy working adults younger than 65 years can reduce the rates of ILI, lost workdays, and physician visits during years when the vaccine and circulating viruses are similar, but vaccination may not provide overall economic benefits in most years.

FROM: Bridges CB, Thompson WW, Meltzer MI, Reeve GR, Talamonti WJ, Cox NJ, et al. Effectiveness and cost-benefit of influenza vaccination of healthy working adults: a randomized controlled trial. *JAMA* 2000;284:1655-1663.