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Cost-effectiveness of a vaccine to prevent herpes zoster and postherpetic neuralgia in older adults.

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Summary for patients in:

- [Ann Intern Med.](#) 2006 Sep 5;145(5):114.

Abstract

BACKGROUND: The Shingles Prevention Study showed that a varicella-zoster virus (VZV) vaccine administered to adults 60 years of age or older reduced the incidence of herpes zoster from 11.12 to 5.42 cases per 1000 person-years. Median follow-up was 3.1 years, and relative risk reduction was 51.3% (95% CI, 44.2% to 57.6%).

OBJECTIVE: To assess the extent to which clinical and cost variables influence the cost-effectiveness of VZV vaccination for preventing herpes zoster in immunocompetent older adults.

DESIGN: Decision theoretical model.

DATA SOURCES: English-language data published to March 2006 identified from MEDLINE on herpes zoster rates, vaccine effectiveness, quality of life, medical resource use, and unit costs. **Target Population:** Immunocompetent adults 60 years of age or older with a history of VZV infection. **Time Horizon:** Lifetime. **Perspective:** U.S. societal. **Interventions:** Varicella-zoster virus vaccination versus no vaccination. **Outcome Measures:** Incremental quality-adjusted survival and cost per quality-adjusted life-year (QALY) gained. **Results of Base-Case Analysis:** By reducing incidence and severity of herpes zoster, vaccination can increase quality-adjusted survival by 0.6 day compared with no vaccination. One scenario in which vaccination costs less than 100,000 dollars per QALY gained is when 1) the unit cost of vaccination is less than 200 dollars, 2) the age at vaccination is less than 70 years, and 3) the duration of vaccine efficacy is more than 30 years. **Results of Sensitivity Analysis:** Vaccination would be more cost-effective in "younger" older adults (age 60 to 64 years) than in "older" older adults (age > or =80 years). Longer life expectancy and a higher level of vaccine efficacy offset a lower risk for herpes zoster in the younger group. Other factors influencing cost-effectiveness include quality-of-life adjustments for acute zoster, unit cost of the vaccine, risk for herpes zoster, and duration of vaccine efficacy.

LIMITATIONS: The effectiveness of VZV vaccination remains uncertain beyond the median 3.1-year duration of follow-up in the Shingles Prevention Study.

CONCLUSIONS: Varicella-zoster virus vaccination to prevent herpes zoster in older adults would increase QALYs compared with no vaccination. Resolution of uncertainties about the average quality-of-life effects of acute zoster and the duration of vaccine efficacy is needed to better determine the cost-effectiveness of zoster vaccination in older adults.

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