

Zoster vaccine

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Clinical question

What are the benefits of the zoster vaccine?

Evidence

Two large industry-supported multicentre RCTs of zoster vaccine or placebo vaccine:

- One RCT of 38 546 immunocompetent patients aged 60 years or older (median age 69 years, 59% male).¹ Outcomes at 3 years:
 - Zoster (herpes zoster [HZ], shingles) incidence—vaccine 1.67%, placebo 3.42%; NNT=58.
 - Postherpetic neuralgia (PHN) incidence—vaccine 0.14%, placebo 0.42%; NNT=358.
 - Seven-year outcomes of a subgroup of patients were not helpful, as all placebo patients were offered the vaccine, and the numbers are difficult to interpret.²
- One RCT of 22 439 immunocompetent patients aged 50 to 59 years (mean age 55 years, 62% female).³ Followed for 1.3 years:
 - Zoster incidence—vaccine 0.27%, placebo 0.88%; NNT=164;—conversion to 3 years, NNT=71.
 - Limitations: short follow-up; PHN rates not reported.
- Adverse events: about 2% more patients had systemic adverse events with the vaccine,^{1,3,4} and serious adverse events were also slightly more common (1.9% vs 1.3%).¹

Context

- Although the vaccine reduces the relative risk of HZ by 50% to 70%, 60 to 70 patients must be vaccinated to prevent 1 case of HZ over 3 years.^{1,3}
- Rates of HZ increase with age: 3/1000 per year in those 40 to 64 years; 7.5/1000 per year in those 75 and older.⁵
 - Overall, about 11% of patients 60 years and older who develop HZ develop PHN.¹
 - PHN risk increases with age,^{6,7} and is rare (about 1%) in patients younger than 50 years of age.⁶
- Recurrence of HZ is low,^{1,8} but might be as high as 5.7% over 7 years if including immunocompromised patients.⁹
- Zoster vaccine guideline recommendations
 - Canada: vaccinate those 60 years of age and older; can vaccinate those 50 to 59 years old.¹⁰
 - United States: vaccinate those 60 years of age and older; do not recommend vaccinating those 50 to 59 years old (owing to vaccine supply issues).¹¹
- The cost of the vaccine is about \$200.
- Remaining questions about the vaccine:
 - Is it safe and effective in immunocompromised patients?
 - Is it beneficial for patients with previous HZ?
 - What is the long-term efficacy (will a booster be required)?

Bottom line

Over 3 years, zoster vaccine will prevent 1 HZ case for every 60 to 70 patients vaccinated (and 1 PHN case in 350 vaccinated patients). Long-term benefits and effectiveness in specific populations (eg, the immunocompromised, those with previous HZ) are unclear.

Implementation

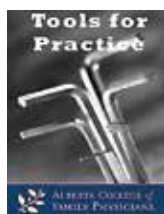
Reminders in the electronic medical record appear to increase zoster vaccine uptake¹²; however, these do not promote shared, informed decision making. Detailed numeric information is necessary.¹³ For average patients, 1 of every 60 to 70 of those vaccinated will avoid an HZ case over 3 years. Patients with immune-mediated diseases or who are taking immunosuppressive medication have 1.5 to 2 times the risk of developing HZ¹⁴; thus, it might be reasonable to more strongly encourage vaccination in those initiating immunosuppressive therapy in the near future. 🌿

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The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

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