October 02, 2014

Safety and Effectiveness of the Herpes Zoster Vaccine to Prevent Postherpetic Neuralgia – 2014 Update and Consensus Statement by the Canadian Pain Society

The Canadian Pain Society (CPS) hosted its first Study Day in Toronto in July 2014, attended by experts in various fields of pain management and research (listed below). The aim was to review the National Advisory Committee on Immunization (NACI) guidelines and to prepare a CPS position statement concerning the use of the zoster vaccine in Canada.

Position 1: The Canadian Pain Society strongly encourages health care practitioners to discuss herpes zoster (HZ) vaccination with *immunocompetent* patients aged 60 and older.

Rationale: Before 1996, when a vaccine was introduced, almost all Canadian children (over 90%) developed chickenpox, caused by the varicella zoster virus. The virus remains dormant in the dorsal root and the trigeminal ganglia until it is reactivated under certain conditions, causing herpes zoster (HZ, commonly known as shingles). About **20%** of Canadians are expected to develop HZ at some point in their lives. In Canada, **130,000 new cases** of shingles are reported each year. Of these, about **17,000** will go on to develop postherpetic neuralgia (PHN). The estimated annual Canadian direct health care cost for HZ and PHN is about $68 million. However, with an aging population, the incidence of HZ and the related costs are expected to increase.

Shingles typically begins as a painful skin rash, usually on one side of the body. Pain may also be present without a rash. Repeat episodes are rare. Complications can include nerve damage, facial paralysis, serious eye infections, and other secondary infections. However, the most common and serious complication of HZ is PHN, defined as pain lasting more than three months after onset of the acute episode.
Age is the greatest risk factor for developing PHN: in the 60 and over age group, 13% of those who develop shingles will experience PHN, and approximately 6% of those who develop shingles will experience persistent and unrelieved pain. Greater pain intensity with the initial shingles outbreak is associated with increased risk of developing PHN. Recent studies in the UK, Europe, and Asia have also indicated that some individuals are at risk for stroke following an HZ episode, and the growing awareness of the role of HZ in vascular disease merits further research.

Although PHN has low incidence, it has major and long-lasting impacts on health and quality of life.

Pain due to PHN is often neuropathic and very challenging to treat. Analgesic medications such as tricyclic antidepressants (e.g., amitriptyline, nortriptyline) and anticonvulsants (e.g., gabapentin, pregabalin) provide only partial relief. Some patients suffer severe lifelong pain, which reduces their quality of life (QOL), in turn affecting the QOL of family, friends, and colleagues. The impact of mild PHN on QOL can be compared to that of congestive heart failure (CHF), and the impact of severe PHN can be compared to that of depression, diabetes, asthma, or multiple sclerosis (MS). **In adults aged 60 to 69, the vaccine reduces the chances of getting shingles by 50% and of developing PHN by 66%.** Furthermore, in individuals who still get shingles after vaccination, the median pain duration is reduced from 24 to 21 days and the severity of the shingles is less. The vaccine is safe, with side-effects commonly limited to mild local skin reactions. According to the latest estimates, the vaccine protects against shingles for at least seven years, and booster shots are not currently recommended.

Position 2: The Canadian Pain Society encourages health care practitioners to discuss HZ vaccination with *patients who are at increased risk for shingles*.

Rationale: Conditions associated with increased risk for shingles include:

- lupus
- rheumatoid arthritis
- inflammatory bowel disease
- psoriasis
- chronic obstructive pulmonary lung disease (COPD)
- diabetes

- cancerous tumours, leukemias
- asthma
- use of anti-inflammatory drugs such as corticosteroids, disease-modifying antirheumatic drugs, TNFa sequestering antibodies
- Other.

Whether the vaccine can be given to immunosuppressed individuals with some of the above conditions must be decided by a health professional on a case-by-case basis due to the limited evidence for effectiveness in these populations and the potential risks.* This is a live virus vaccine. If a decision has been made for the individual to receive the vaccine, it must be given a minimum of one month prior to immunosuppressive treatment. If indicated, household contacts of immunosuppressed persons may receive the vaccine.

IMPORTANT: Although persons with HIV are also at increased risk for shingles, they **should not** be given the vaccine. Nor should it be given to persons who are taking high doses of corticosteroids (>20mg/day of prednisone) or other immunosuppressive drugs.

Position 3: Drug treatment (e.g., antivirals, corticosteroids) of active shingles has not been shown to decrease the risk of PHN.

Rationale: Shingles can be treated with antiviral drugs such as acyclovir, famciclovir, and valacyclovir. However, these drugs are effective only if given within **72 hours** of the first signs of the initial pain or rash. Antivirals have been shown to decrease the acute episode symptoms,

Position 3: Drug treatment (e.g., antivirals, corticosteroids) of active shingles has not been shown to decrease the risk of PHN.

Rationale: Shingles can be treated with antiviral drugs such as acyclovir, famciclovir, and valacyclovir. However, these drugs are effective only if given within **72 hours** of the first signs of the initial pain or rash. Antivirals have been shown to decrease the acute episode symptoms, but may not prevent PHN. Corticosteroid or gabapentin use during the acute episode has not been shown to prevent PHN.

Acknowledgements: The 2014–2015 CPS Study Day Series is funded by an unrestricted educational grant from Merck and Company Incorporated, a Canada Research Chair grant (to G Lavigne), and an IMHA–Canadian Institutes of Health Research grant.

Additional Resources:

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Appendix:

1. Administration: Health Canada has authorized and recommended the HZ vaccine for persons aged 60 years and older who are not immunocompromised (see the recommended reading list). Persons aged 50 to 59 may also be considered for vaccination. It can be given at the same time (but at a different site) as the pneumococcal vaccine or influenza vaccine. Individuals who have a serious reaction to gelatin or neomycin should not get the vaccine, nor should people who are ill with a fever exceeding 38.5° C (101.3° F), have active untreated tuberculosis, or are pregnant or breastfeeding. The vaccine can be given one year after an initial HZ episode, and it can also be administered to those who are not sure if they have had chickenpox. It should not be given to persons who have received the chickenpox vaccine or are immunocompromised.

Previously, the vaccine had to be kept frozen before use (–15° C), but a new lyophilized vaccine that can be refrigerated (2–8° C) is now available. It is reconstituted with a diluent and must be used within a half hour after mixing. The vaccine is injected subcutaneously, usually in the arm. Depending on the province, the HZ vaccine can be administered by a nurse, pharmacist, or physician. The vaccine is sold at certain clinics or pharmacies, and some health insurance plans will cover the cost. For insurance purposes, the drug identification number (DIN) is usually required.

The rules for getting and giving the vaccine differ across the Canadian provinces. For example, a prescription is required in Ontario, but not in other provinces.

Health professionals who can administer the zoster vaccine:

Province	**Physician**	**Nurse**	**Pharmacist****
British Columbia	Yes	Yes	Yes
Alberta	Yes	Yes	Yes
Saskatchewan	Yes	Yes	No
Manitoba	Yes	Yes	Yes
Ontario	Yes	Yes	No
Quebec	Yes	Yes	No
New Brunswick	Yes	Yes	Yes
Nova Scotia	Yes	Yes	Yes
PEI	Yes	Yes	No
Newfoundland	Yes	Yes	No

NB: Because conditions are subject to change, this information should be regularly updated.

**In some pharmacies, nurses are authorized to administer the vaccine.

2. CPS Study Day Participants

Panelists selected by CPS
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Invited Observers from Merck Canada:

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Catherine Paquette, Manager, Public Health Policy and Government Relations – Vaccines.

Caroline Rodier, Medical and Scientific Liaison.