



# Varicella vaccine: Summary of a Canadian Consensus Conference

In December 1998, a lyophilized, live attenuated Oka strain varicella vaccine (Varivax, Merck Frosst Canada Inc, Kirkland, Quebec) was licensed for use in Canada, and in May 1999, the National Advisory Committee on Immunization published a statement on the recommended use of the vaccine (1). The committee recommended primary vaccination of all healthy children 12 months of age or older who are susceptible to the disease. However, the committee did not make specific recommendations about the implementation of publicly funded programs because a national consensus conference to address such issues had not happened. The conference was held from May 5 to 7, 1999 in Montreal, Quebec. The major objectives of the conference were to present a forum for federal, provincial and territorial public health representatives, clinical experts and other professional stakeholders to discuss and exchange ideas on issues related to the varicella vaccine, including implementation of population-based vaccination programs, provider and public acceptance of the vaccine and how to maximize the benefits of vaccine for the Canadian population. Specifically, conference participants were to discuss the following issues:

- national goals for the control of varicella and zoster;
- a coordinated approach to varicella vaccination program implementation in all provinces and territories; and
- postmarketing research needs.

The conference brought together provincial epidemiologists, chief medical officers of health, paediatricians, obstetricians and nurses involved in the delivery of vaccine programs across the country. Five working groups dealt with the issues of public health goals and objectives for varicella control, the development and implementation of varicella vaccination programs, varicella vaccine use in special populations, the promotion of varicella vaccination programs, and surveillance needs.

The major recommendations from the consensus conference are as follows.

1. Federal, provincial and territorial goals for the reduction of morbidity from varicella infection should be established by the year 2003.
2. All provinces and territories should introduce a routine varicella immunization program within two years after a refrigerator-stable vaccine becomes available or by 2005, whichever is earlier.
3. A high varicella vaccine coverage in the population should be achieved by 2010, ie, 95% coverage by age two years and 97% coverage by age seven years. (The conference recommended that these targets be 'tied' to those for measles vaccine coverage, which are 97% and 99%, respectively).
4. Programs for the varicella immunization of children should be harmonized across the country.
5. Systematic immunization should begin as soon as possible for susceptible youth in their preteen years with whatever vaccine is available, preferably through a school-based program.
6. As soon as a universal vaccination program is in place, a catch-up program should be implemented and completed within five years.
7. The following high priority groups should be targeted for immunization if they are susceptible to the disease: health care workers, individuals in close contact with pregnant women, susceptible household contacts of immunocompromised individuals, child care workers, and primary and secondary school teachers.

8. Organizations such as the Canadian Paediatric Society, the College of Family Physicians of Canada, the Canadian Infectious Disease Society, the Canadian Nurses Association and the Canadian Public Health Association should raise the profile of varicella disease and increase awareness of the usefulness of the vaccine through articles in professional publications and presentations at professional meetings.

It was recommended that the Canadian Paediatric Society take a lead role in promoting varicella vaccination by developing a speaker list for continuing education events and media interviews, an educational package (eg, slides, handouts) for use in presentations at the local level, and by incorporating information on varicella vaccine in future editions of *Your Child's Best Shot* (2) and other educational materials.

The conference also arrived at a consensus about the surveillance of varicella and vaccine safety during the various phases of the introduction of vaccination programs.

How should paediatricians and physicians respond to the introduction of the varicella vaccine? First, it is necessary to dispel the myth that varicella is an essentially benign childhood disease. Most children who get infected have a relatively mild illness, and do not develop complications or need hospitalization. Still, it is estimated that varicella is responsible for about 1500 to 2000 hospitalizations/year in Canada, including 70% in previously healthy children (unpublished data). It is also estimated that varicella is responsible for four to eight deaths/year in Canada, and between 100,000 and 160,000 health care contacts every year (unpublished data). The complications of varicella include cutaneous bacterial infections (which can be severe and are responsible for 50% of varicella-associated hospitalizations among children), pneumonia, thrombocytopenia and encephalitis (unpublished data). It is estimated that 15% of invasive group A streptococcal infections in children are a complication of varicella. Varicella is a severe disease in immunocompromised individuals, with a mortality rate in untreated patients approaching 10%.

#### INFECTIOUS DISEASES AND IMMUNIZATION COMMITTEE

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Second, paediatricians and physicians can inform patients and their parents about the benefits of the varicella vaccine. The vaccine offers 70% to 90% protection against varicella of any severity, and 95% protection against severe varicella for at least seven to 10 years after the vaccination. The vaccine has an excellent safety profile (1). Reactions are generally mild and include an injection site reaction in 20% of individuals. A mild rash is seen in 3% to 5% of patients and a mild fever in 15% of patients.

Third, paediatricians and physicians should offer the vaccine to patients because it will take time before publicly funded programs are in place. Major impediments to the establishment of publicly-funded programs are the high cost of the vaccine, and the logistics involved in storing and distributing a vaccine that needs to be kept frozen before use. In the short run, it will be important to target high risk populations such as teenagers and adults who have not had chickenpox because the disease is more severe in these age groups.

Finally, paediatricians and physicians should advocate for the introduction of publicly funded immunization programs against varicella in Canadian provinces and territories. Traditionally, paediatricians have been advocates for preventive measures targeting children's health. This is even more important for varicella vaccine because without publicly funded programs, many children will not have access to the vaccine. Children deserve the best medical care that doctors can provide.

*Detailed recommendations on the use of the varicella vaccine can be found in the National Advisory Committee on Immunization document, Statement on Recommended Use of Varicella Virus Vaccine, published in Can Commun Dis Rep 1999;25:(ACS-1). It is available on the Internet at <[www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/99vol25/25sup/acs1.html](http://www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/99vol25/25sup/acs1.html)>.*

#### REFERENCES

1. National Advisory Committee on Immunization. Statement on recommended use of varicella vaccine. *Can Commun Dis Rep* 1999;25(ACS-1):1-16.
2. Canadian Paediatric Society. *Your Child's Best Shot: A Parent's Guide to Vaccination*. Ottawa: Canadian Paediatric Society, 1997.

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*Internet addresses are current at the time of publication.*