

# Should New Vaccines Be Given to Every Child?

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As presented at the University of Saskatchewan's Women's and Children's Health Conference (February 2004)

## Tandi's case

Three-year-old Tandi and her father present to your office requesting information on the "newer" vaccines (conjugate meningococcal, conjugate pneumococcal and varicella).



Currently, these vaccines are not part of the routine childhood immunization schedule in the province they reside and Tandi's parents would need to purchase the vaccines.

Tandi is up-to-date as far as this province's childhood immunization schedule is concerned. She received:

- diphtheria at two months
- tetanus at four months
- pertussis at six months
- polio and haemophilus influenzae at 18 months and
- measles, mumps and rubella at 12 and 18 months.

She does not have any underlying medical conditions and attends a half-day program at a local school.

**Would you recommend her receiving the three newer vaccines?**

**If the family cannot afford all three vaccines, how would you assist with the decision-making?**

**For the answers, go to page 85**

Photo by Scott Wilson, Medical Media Services, Regina Qu'Appelle Health Region, Regina, Saskatchewan.

With more and more new vaccines—such as conjugate meningococcal, conjugate pneumococcal and varicella—becoming available and some provinces not able to immediately include them in their childhood immunization schedules, physicians are often approached by parents requesting information on these newer vaccines. One of the concerns is that these newer vaccines are not always affordable for all those who would like to receive them.

## ► *What are the indications for receiving these three vaccines?*

The National Advisory Committee on Immunization (NACI) published recommendations in the Canadian Immunization Guide (Table 1).

## ► *How would these vaccines be given?*

Both the conjugate vaccines (meningococcal and pneumococcal) are given intramuscularly, whereas the varicella vaccine is given subcutaneously. Depending on the age of the person, the number of doses might vary (Table 2).

Before administering any vaccine, always ensure there are no contraindications, such as allergies to any components of the vaccines.

Table 1

### NACI recommendations for routine immunization

| Vaccine                 | Routine recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conjugate meningococcal | <ul style="list-style-type: none"> <li>• Children under 5 years</li> <li>• Adolescents and young adults</li> <li>• People at increased risk of meningococcal disease, such as those with functional or anatomic asplenia</li> <li>• Children 5 years and older who have not reached adolescence, can also be immunized, although they might be at a lower risk</li> </ul>                                                                                                                                                                                                                                                                                                                                                   |
| Conjugate pneumococcal  | <ul style="list-style-type: none"> <li>• Children 23 months and younger</li> <li>• Children 24-59 months who are at higher risk for invasive pneumococcal disease, such as those with sickle cell disease, functional or anatomic asplenia, HIV infection, other immunocompromising conditions (e.g., solid organ transplants, nephrotic syndrome) and those with chronic medical conditions of the cardiopulmonary systems and diabetes</li> <li>• The vaccine should be considered for:               <ul style="list-style-type: none"> <li>• All other children up to the age of 59 months</li> <li>• Children who attend day care</li> <li>• Aboriginal children living in isolated communities</li> </ul> </li> </ul> |
| Varicella               | <ul style="list-style-type: none"> <li>• Healthy children, adolescents and adults</li> <li>• People 12 months and older who are susceptible (including women of childbearing age, health-care workers, household contacts of immunocompromised people, those exposed occupationally, new immigrants from tropical climates)</li> <li>• Susceptible people at high risk for severe varicella or its complications:               <ul style="list-style-type: none"> <li>• Children and adolescents on chronic acetylsalicylic acid treatment</li> <li>• People with cystic fibrosis</li> <li>• Certain immunocompromised individuals*</li> </ul> </li> </ul>                                                                 |

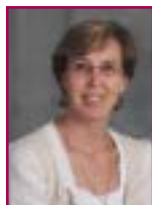
\*See Canada Communicable Disease Report. Update on Varicella. Volume 30, ACS-1, February 1, 2004.

\*See also Resources 2-7 at end of article.

### ▶ Can these vaccines be given at the same time as others?

Yes, but using a different syringe and needle, as well as site. In the case of varicella, it either needs to be given on the same day as another live vaccine or four weeks apart.

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### ▶ What are the side-effects?

Local pain and redness at the injection site can be expected in 10% to 30% of vaccinees. In the case of varicella, about 5% can develop a blister-like rash around the injection site or on the body.

Other side-effects might include fever (with all three vaccines), vomiting and diarrhea (with the two conjugate vaccines), headache and fussiness.


Table 2

Recommended schedule

| Vaccine                 | Age                                 | Primary series                             | Booster                                                                     |
|-------------------------|-------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------|
| Conjugate meningococcal | < 4 months                          | 2, 4 and 6 months (at least 4 weeks apart) | Not thought to be necessary at present                                      |
|                         | 4-12 months                         | 2 doses (at least 4 weeks apart)           | Not thought to be necessary at present                                      |
|                         | Older than 1 year                   | One dose                                   | Not thought to be necessary at present                                      |
| Conjugate pneumococcal  | 2-6 months                          | 3 doses, 6-8 weeks apart                   | 1 dose at 12-15 months (given 6-8 weeks after final dose in primary series) |
|                         | 7-11 months                         | 2 doses, 6-8 weeks apart                   | 1 dose at 12-15 months (given 6-8 weeks after final dose in primary series) |
|                         | 12-23 months                        | 2 doses, 6-8 weeks apart                   |                                                                             |
|                         | 24-59 months:<br>Healthy<br>At risk | 1 dose<br>2 doses, 8 weeks apart           |                                                                             |
| Varicella               | 12 months to 12 years               | 1 dose                                     |                                                                             |
|                         | 13 years and older                  | 2 doses at least 4 weeks apart             |                                                                             |

► *What should be considered when prioritizing these vaccines?*

A parent might not be in a position to purchase all of these vaccines at the same time. In deciding on the priority, the following items should be discussed:

- How common is the disease?
- What age group is most affected?
- What is the usual outcome of the disease?
- What complications might occur and who is most affected?
- How effective is the vaccine in preventing the disease?
- Does this child fall into a risk group not currently covered by the provincial program? 

A followup on Tandi

Tandi's case will need one dose each of conjugate meningococcal, conjugate pneumococcal and varicella.

Resources

1. Canadian Immunization Guide. Sixth Edition, 2002, pp 154-8, 179-80, 225-7.
2. Canada Communicable Disease Report. Statement on Recommended use of Meningococcal Vaccines. Volume 27, ACS-6, 15 October 2001.
3. Canada Communicable Disease Report. Supplementary Statement on Conjugate Meningococcal Vaccines. Volume 29, ACS-6, 1 September 2003.
4. Canada Communicable Disease Report. Statement on Recommended Use of Pneumococcal Conjugate Vaccine. Volume 28, ACS-2, 15 January 2002.
5. Canada Communicable Disease Report. Statement on Recommended Use of Varicella Virus Vaccine. Volume 25, ACS-1, 1 May 1999.
6. Canada Communicable Disease Report. NACI Update to Statement on Varicella Vaccine. Volume 28 (ACS-3), 15 February 2002.
7. Canada Communicable Disease Report. Update on Varicella. Volume 30, ACS-1, February 1, 2004.