

Ministry of Health

## Qs & As for Health Care Providers: Pneumococcal Vaccine Transition

This document will assist vaccine providers with the transition of the current pneumococcal conjugate 13-valent (Pneu-C-13) and pneumococcal polysaccharide 23-valent (Pneu-P-23) vaccines to the new pneumococcal conjugate 15-valent (Pneu-C-15) and 20-valent (Pneu-C-20) vaccines .

### Which pneumococcal vaccines are authorized for use in Canada?

Type of Vaccine	Vaccine Name	Abbreviation
Pneumococcal conjugate (Pneu-C)	Prevnar 13	Pneu-C-13
	Vaxneuvance	Pneu-C-15
	Prevnar 20	Pneu-C-20
Pneumococcal polysaccharide (Pneu-P)	Pneumovax 23	Pneu-P-23

### Which pneumococcal vaccines were previously publicly funded and what vaccines are currently publicly funded in Ontario?

Vaccine program	Eligible age group	Previous vaccine	Current vaccine
Routine	6 weeks to 4 years of age	Pneu-C-13	Pneu-C-15
Routine	≥65 years of age	Pneu-P-23	Pneu-C-20
High risk	≥6 weeks of age and older	Pneu-P-23 and Pneu-C-13	Pneu-C-20

## What serotypes do each of the vaccines protect against?

Serotypes	Pneu-C-13	Pneu-C-15	Pneu-C-20	Pneu-P-23
1	✓	✓	✓	✓
4	✓	✓	✓	✓
5	✓	✓	✓	✓
6B	✓	✓	✓	✓
7F	✓	✓	✓	✓
9V	✓	✓	✓	✓
14	✓	✓	✓	✓
18C	✓	✓	✓	✓
19F	✓	✓	✓	✓
23F	✓	✓	✓	✓
3	✓	✓	✓	✓
19A	✓	✓	✓	✓
6A	✓	✓	✓	
22F		✓	✓	✓
33F		✓	✓	✓
8			✓	✓
10A			✓	✓
11A			✓	✓
12F			✓	✓
15B			✓	✓
2				✓
9N				✓
17F				✓
20				✓

## **What is the difference between conjugate and polysaccharide vaccines?**

Protection induced by polysaccharide vaccines wanes more quickly (within 5 years of vaccination) due to their T cell independent mode of action, than conjugate vaccines. In contrast, conjugate vaccines induce memory, provide longer duration of protection, and provide the ability for boosting by involving T cells.

Polysaccharide vaccines have also been associated with hyporesponsiveness (i.e., lower antibody titres against serotypes) with subsequent dosing. However, this has rarely been demonstrated to affect clinical outcomes. The conjugate vaccines have not been associated with hyporesponsiveness.

## **For the high-risk programs, is the protection from Pneu-C-20 vaccine expected to be better than that offered by the Pneu-P-23 vaccine?**

Pneu-C-20 vaccine covers close to 90% of serotypes included in Pneu-P-23 vaccine. It also has the additional benefit of being a conjugate vaccine. Pneu-C-20 vaccine is expected to provide protection that is similar to Pneu-C-13 for the shared strains and will offer protection against the additional 7 strains.

## **Who is eligible for Ontario's high-risk pneumococcal immunization program?**

Eligibility depends on age, previous pneumococcal immunization, and presence of specific medical and non-medical conditions that increase an individual's risk for invasive pneumococcal disease (IPD). Refer to Health Care Provider Fact Sheets for eligibility criteria and vaccine schedules.

### **List of high-risk criteria that increases an individual's risk for IPD**

1. Asplenia (functional or anatomic), splenic dysfunction
2. Congenital (primary) immunodeficiencies involving any part of the immune system, including B-lymphocyte (humoral) immunity, T-lymphocyte (cell) mediated immunity, complement system (properdin, or factor D deficiencies), or phagocytic functions
3. HIV infection
4. Immunocompromising therapy including use of long-term systemic corticosteroid, chemotherapy, radiation therapy, post-organ transplant therapy, certain anti-rheumatic drugs and other immunosuppressive therapy
5. Malignant neoplasms, including leukemia and lymphoma
6. Sickle-cell disease and other sickle cell hemoglobinopathies
7. Solid organ or islet cell transplant (recipient)
8. Hepatic cirrhosis due to any cause
9. Chronic renal disease, including nephrotic syndrome

10. Chronic cardiac disease
11. Chronic liver disease, including hepatitis B and C
12. Chronic respiratory disease, excluding asthma, except those treated with high-dose corticosteroid therapy
13. Chronic neurologic conditions that may impair clearance of oral secretions
14. Diabetes mellitus
15. Cochlear implant recipients (pre/post implant)
16. Chronic cerebral spinal fluid leak
17. Residents of nursing homes, homes for the aged and chronic care facilities or wards
18. Hematopoietic stem cell transplant (HSCT) (recipient)

### **Would those who are eligible to receive Pneu-C-20 vaccine continue to be eligible for a Pneu-P-23 vaccine booster?**

If a client receives Pneu-C-20 vaccine, a Pneu-P-23 vaccine booster is not recommended. Pneumococcal conjugate vaccines are more immunogenic and provide longer-lasting protection than the pneumococcal polysaccharide vaccine. Therefore, Pneu-C-20 vaccine can be offered as a single dose without a subsequent dose of Pneu-P-23 vaccine, which aligns with recommendations from the [National Advisory Committee on Immunization \(NACI\)](#).

### **Will Pneu-P-23 vaccine continue to be publicly funded?**

Pneu-P-23 vaccine will no longer be publicly funded as it will be replaced with the Pneu-C-20 vaccine. NACI no longer recommends the use of Pneu-P-23 vaccine if Pneu-C-20 vaccine is available for individuals at high risk of IPD.

### **Will individuals at high risk for IPD who receive Pneu-C-20 vaccine require a booster dose of Pneu-C-20 vaccine in the future?**

Currently, there are no recommendations for a booster dose of Pneu-C-20 vaccine.

Re-immunization using a same-valency conjugate vaccine following the completion of an age-appropriate schedule is not currently recommended since it is not known whether additional doses will confer an added benefit. For example, children at increased risk of IPD and hematopoietic stem cell transplant (HSCT) recipients who have completed a vaccine series that includes at least one dose of Pneu-C-20 do not require further doses and adults for whom Pneu-C-20 is indicated should only receive one dose of Pneu-C-20.

## **Why is Pneu-C-20 vaccine not being used for all pneumococcal vaccine programs?**

[NACI](#) states that either Pneu-C-15 or Pneu-C-20 may be used for routine immunization of healthy children who are 6 weeks to 4 years of age and not at increased risk for IPD. Pneu-C-15, which is a higher-valent pneumococcal conjugate vaccine, can protect children against additional serotypes compared to Pneu-C-13 and is expected to further reduce the burden of IPD. [NACI](#) recommends that the Pneu-C-20 vaccine be used for individuals 6 weeks and older who are at increased risk of IPD and for programs for individuals 65 years of age and older.

## **Are there different pediatric pneumococcal vaccine schedules?**

There are two pediatric pneumococcal vaccine schedules for children ages 6 weeks to 4 years:

1. Children **not** at increased risk of IPD: Pneu-C-15 vaccine is routinely administered using a 3-dose schedule at 2 months, 4 months and 12 months of age.
2. Children at increased risk of IPD: Pneu-C-20 vaccine is routinely administered using a 4-dose schedule at 2 months, 4 months, 6 months and 12 months of age.

Catch-up schedules for children who missed doses are detailed in Table 3, Table 4 and Table 5 of the Health Care Provider Fact Sheet: Pneumococcal Conjugate Vaccines for Children Aged 6 Weeks to 4 Years.

## **Will catch-up programs for those who have previously completed their pneumococcal immunizations be considered?**

The current transition for the pneumococcal program will focus on those who have not completed or have not received all eligible publicly funded pneumococcal vaccine(s) (e.g., Pneu-P-23 and/or Pneu-C-13).

The ministry is currently examining future catch-up programs for Pneu-C-20 vaccine for those who have received all eligible publicly funded pneumococcal immunizations.

## **How can I order Pneu-C-15 and Pneu-C-20 vaccines?**

Vaccine providers should order vaccine from their usual vaccine supply source (i.e., public health unit or the Ontario Government Pharmaceutical and Medical Supply Service (OGPMSS)).

## **What should I do with my Pneu-C-13 and Pneu-P-23 vaccines?**

The ministry may receive a credit for any unused Pneu-C-13 and/or Pneu-P-23 vaccines. It is important for you to return any unused pneumococcal vaccines to your usual vaccine supply source (i.e., public health unit or OGPMSS), once you have received doses of Pneu-C-15 and Pneu-C-20 vaccines.

## **Guidance on reporting Adverse Events Following Immunization (AEFI)**

To ensure the ongoing safety of vaccines in Ontario, reporting of AEFIs by physicians, nurses, pharmacists or other persons authorized to administer an immunizing agent is mandatory under the *Health Promotion and Protection Act*. Vaccine providers are asked to report AEFIs through local public health units using the [Ontario AEFI Reporting Form](#).

A list of public health units is available at:

[www.health.gov.on.ca/en/common/system/services/phu/locations.aspx](http://www.health.gov.on.ca/en/common/system/services/phu/locations.aspx).

Those administering vaccines should ensure that the vaccine recipients are aware of the need to immediately report AEFIs to their health care provider. Subsequently, health care providers should report any serious or unexpected adverse event felt to be temporally related to vaccination to their local public health unit.

## **Where can I find the product monographs?**

Product monographs are available from Health Canada:

- Pneu-C-15: [Vaxneuvance](#)
- Pneu-C-20: [Prevnar 20](#)