# Pneumococcal Program Updates

## Seniors Congregate Care Facilities

Provincial Partner Oversight Team – June 2024

Alberta Health Services

# Introduction

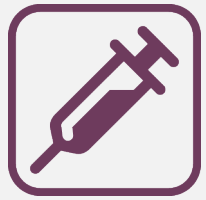
For more detailed information it is important for staff to refer to other program resources found in the AHS Immunization Program Standards Manual webpage:

- AHS Vaccine Biological pages and/or Vaccine Product Mongraphs
- AHS Vaccine Storage and Handling elearning modules and Standard
- Guidelines for report of adverse events following immunizations (AEFI)
- Reporting requirements and data collection guidelines
- Alberta Health Pneumococcal Immunization Program Policies

# History of Pneumococcal Vaccine in Alberta

1998: Pneumococcal Polysaccharide vaccine offered nationally for:

- 65 years and older
- 64 years and under with certain health conditions or living situations



2001: Prevnar™ Pneumococcal Conjugate vaccine introduced to childhood immunization program
Later expanded to include persons with high risk medical conditions

June 24, 2024: Alberta begins to offer Pneumococcal Conjugate 20, Prevnar 20™

# Why is Pneumococcal Conjugate Vaccine Important?

Pneumococcal vaccines are used to prevent serious illnesses caused by the Streptococcus pneumoniae bacteria

Worldwide, pneumococcal disease is a major cause of morbidity and mortality.

In Canada, invasive pneumococcal disease (IPD) is most common among the very young and adults over 65 years.

# What is pneumococcal vaccine?

- Two types of pneumococcal vaccine:
  - Polysaccharide
  - Conjugate
- Pneumococcal conjugate vaccines provide an improved immune response due immunologic memory resulting in higher levels of antibodies. They also have shown better efficacy against nasopharyngeal carriage and noninvasive pneumonia overall.
- Historically called the ‘pneumonia shot’ by seniors
- Prevnar 20™ will be provided throughout the year by facilities, community partners and public health

# Pneumococcal Conjugate Vaccine

| | Prevnar 20™(Pfizer) |
|---|---|
| Dosage/Route | 0.5 mL/IM |
| Packaging | Single Dose: Pre-filled, single dose syringe (luer lock needles not included), 10 doses per package |
| Indication | Individuals 65 years of age and older who have not previously received a Pneu-23 or Pneu-C20 vaccine.<br>Individuals 18 years and older who are at high risk of IPD and have not received previously recommended doses of pneumococcal conjugate and polysaccharide vaccines.<br>Children 2 months to 17 years of age at high risk of IPD. |
| Ingredients | Serotypes:1,3,4,5,6A,6B,7F,8,9V,10A,11A,12F,14,<br>15B,18C,19A,19F,22F,23F and 33F<br>Aluminum phosphate, polysorbate 80, sodium chloride, succinic acid, water for injection |
| Schedule | See biological page |

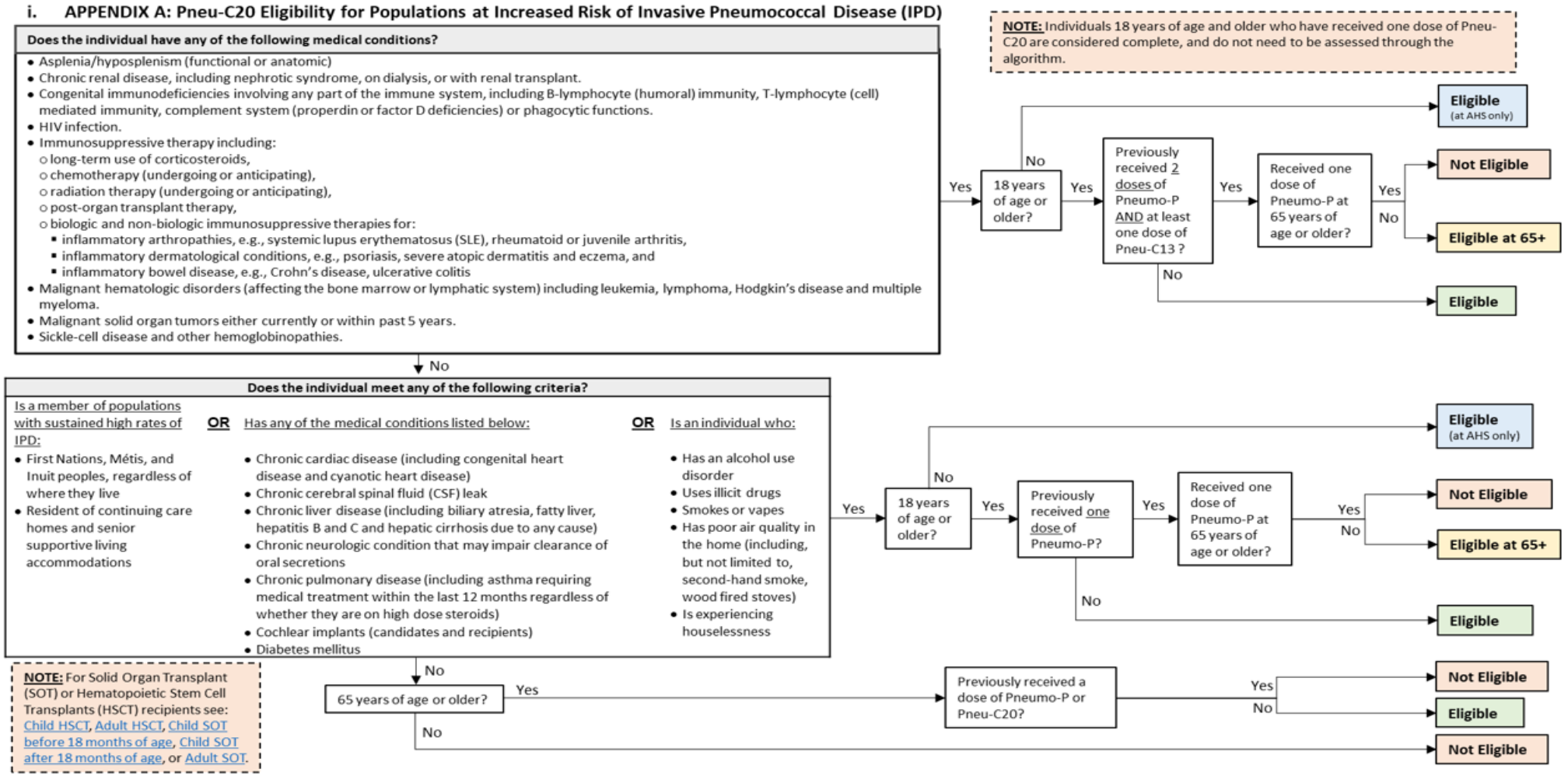
# Pneumococcal 20 (Pneu-C20 or Prevnar 20™) Vaccine Eligibility

- All individuals 65 years and older who have not previously received a dose of Pneu-P or Pneu-C20
- Individuals 18 years and older who are at increased risk for IPD and have not previously received pneumococcal conjugate or polysaccharide vaccines.

Note:

- With the exception of adult HSCT and SOT recipients, individuals18 years and older who previously received another pneumococcal conjugate vaccine series, and the recommended dose(s) of Pneu-P are considered complete and not eligible for Pneu-C20.

# Pneumococcal20 (Pneu-C20 or Prevnar 20™) Vaccine Eligibility



# Groups at Increased Risk for Invasive Pneumococcal Disease (IPD)

## Groups with sustained high rates of IPD:

- Residents of congregate care home or supportive living accommodations
- First Nations, Métis and Inuit peoples, regardless of where they live
  - It is acknowledged that individuals residing in communities and settings experiencing sustained high IPD rates are likely to benefit from an extensive pneumococcal vaccine program. Alberta Health, in partnership with Indigenous Services Canada and AHS, explored the burden of IPD in First Nations people and the burden of disease is higher when compared to the rest of the Alberta population. For this reason, Alberta Health has included First Nations, Metis, and Inuit peoples, regardless of where they live, as individuals eligible for the Pneu-C20 vaccine.

# Groups at Increased Risk for Invasive Pneumococcal Disease (IPD)

Individuals with the following medical conditions:

- Asplenia/hyposplenism (functional or anatomic) See Special Situations for Immunization – Immunization of Specific Populations
- Chronic cardiac disease (including congenital heart disease and cyanotic heart disease).
- Chronic cerebral spinal fluid (CSF) leak.
- Chronic liver disease (including biliary atresia, fatty liver, hepatitis B and C and hepatic cirrhosis due to any cause).
- Chronic neurologic condition that may impair clearance of oral secretions.
- Chronic pulmonary disease (including asthma requiring medical treatment within the last 12 months regardless of whether they are on high dose steroids).
- Chronic renal disease, including nephrotic syndrome, on dialysis, or with renal transplant.
- Cochlear implants (candidates and recipients).
- Congenital 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.
- Diabetes mellitus.

# Groups at Increased Risk for Invasive Pneumococcal Disease (IPD)

- Immunosuppressive therapy including:
  - long term use of corticosteroids
  - chemotherapy (undergoing or anticipating),
  - radiation therapy (undergoing or anticipating),
  - post-organ transplant therapy,
  - biologic and non-biologic immunosuppressive therapies for:
    - inflammatory arthropathies, e.g., systemic lupus erythematosus (SLE), rheumatoid or juvenile arthritis,
    - inflammatory dermatological conditions, e.g., psoriasis, severe atopic dermatitis and eczema, and
    - inflammatory bowel disease, e.g., Crohn's disease, ulcerative colitis

Note: Individuals prescribed eculizumab (Soliris®) or other complement C5 inhibitors are at increased risk of serious infections, especially with encapsulated bacteria, such as *Streptococcus pneumoniae*; therefore, they should receive PneuC-20 at least two weeks before receiving the first doses of complement C5 inhibitors if possible.

For additional information see: Immunization of Specific Populations.

# Groups at Increased Risk for Invasive Pneumococcal Disease (IPD)

- HIV Infection
- Malignant hematologic disorders (affecting the bone marrow or lymphatic system) including leukemia, lymphoma, Hodgkin's disease and multiple myeloma.
- Malignant solid organ tumors either currently or within last 5 years.
- Sickle-cell disease and other hemoglobinopathies.

- Hematopoietic stem cell transplant (HSCT) and/or CAR T-cell therapy recipients. See Immunization for Adult HSCT Transplant Recipients.
- Solid organ or islet transplant (SOT) candidates and recipients. See Immunization for Adult SOT Candidates and Recipients.

# Groups at Increased Risk for Invasive Pneumococcal Disease (IPD)

Individuals who:

- Have an alcohol use disorder
- Use illicit drugs
- Smoke or vape
- Have poor indoor air quality in the home (including, but not limited to, second-hand smoke, wood fired stoves)
- Are experiencing houselessness
  - Definition: At the time of immunization assessment, the individual did not have an address or home (apartment, townhouse, etc.). This would include people staying in shelters, cars, etc

# Pneu-C20 schedule

**Individuals 65 years of age and older who have not received a Pneu-P or Pneu-C20 vaccine dose.**

- 1 dose

# Pneu-C20 schedule

**18 years of age and older at high-risk for IPD**

Individuals who did not previously receive the recommended dose(s) of Pneu-P or Pneu-C20, see biological page and the Pneu-C20 Eligibility for Populations at Increased Risk of IPD algorithm for additional information:

- 1 dose

Note:

- If possible, vaccine should be administered at least 14 days before splenectomy or initiation of immunosuppressive therapy.
- If the vaccine cannot be administered before initiation of immunosuppressive therapy, generally a period of at least 3 months should elapse between therapy cessation and administration of the vaccine.
- If immunosuppression is long-term/ongoing and/or for those with malignant solid organ tumors or malignant hematological disorders currently undergoing immunosuppressive therapy, the vaccine should be administered as soon as possible.

Note: It is recommended that individuals wait at least 8 weeks since their last pneumococcal conjugate vaccine dose or at least one year since their last Pneumo-P vaccine before receiving Pneu-C20.

# Pneu-C20 Immunization Assessment

There is no expectation to review immunization records of current residents.

New residents being accepted into facilities should have their immunization records assessed for:

- A dose of Pneumococcal Polysaccharide (Pneumo-23) at 65 years of age or older
- A dose of Pneu- C20 or Prevnar 20™ vaccine

If they meet either of these then they are not eligible for any additional doses of Pneumococcal vaccine.

If under 65 years of age or do not have any doses of Pneumococcal vaccine in the immunization history, please use the algorithm to assess eligibility.

# Reactions to Pneu-C20 vaccine

| | Prevnar 20™ |
|---|---|
| Common | • Irritability, drowsiness/increased sleep, fatigue<br>• Pain, redness, swelling at injection site<br>• Fever, myalgia, arthralgia, chills<br>• Vomiting, diarrhea<br>• Headache, Joint pain<br>• Rash |
| Uncommon | • Hypersensitivity reaction, including face edema, dyspnea, bronchospasm<br>• Nausea<br>• Rash, angioedema<br>• Vaccination site pruritis and urticaria, lymphadenopathy<br>• Urticaria or urticaria like rash<br>• Seizures |
| Rare | • Anaphylaxis<br>• Allergic reaction |

# Contraindications to Pneu-C

Pneumococcal conjugate vaccine is contraindicated for the following people:

- People who have experienced anaphylaxis to a previous dose of pneumococcal conjugate vaccine or any diphtheria toxoid-containing vaccine
- People who have a known severe hypersensitivity to any component of the vaccine

Note: Pneu-C20 will not protect against serotypes not included in the vaccine

# Commitment to Comfort

Needle Fears

- This can affect people to a degree that they avoid immunization

Alberta Health Services Commitment to Comfort is five principles to improve the immunization experience, health outcomes, satisfaction and encourage repeat attendance to healthcare encounters.

- Make a comfort plan
- Use positive language
- Use comfort positions
- Shift attention
- Use numbing cream

# Reporting of adverse events following immunization (AEFI)

An adverse event following immunization is defined as a serious or unexpected event temporally associated with immunization.

Local reactions are the most reported event following immunization. A local reaction of pain and/or swelling is ONLY reportable if:

1. the onset of swelling is within 48 hours following immunization;

**AND**

2. swelling extends past the nearest joint

**OR**

3. severe pain that interferes with the normal use of the limb lasting greater than 4 days

**OR**

4. reaction requires hospitalization

# AEFI reporting (cont'd)

Any of the following are also reportable adverse events:

- Anaphylaxis
- Other allergic reactions
- Any reaction outside of what is expected

Consult with AHS Adverse Event Following Immunization (AEFI) Team at AEFI@ahs.ca or call 1-855-444-2324 as soon as possible for any case where there is uncertainty as to whether a symptom following immunization is related to the immunization.

Severe reactions (anaphylaxis and death) should be reported within 24 hours and all other reactions within 3 days to the AEFI Team. "Reportable AEFIs" are reported to Alberta Health, and in turn to the National Surveillance Program.

# Anaphylaxis

Alberta Health Services employees need to ensure they have completed the Anaphylaxis Management | Insite (albertahealthservices.ca) learning module.

Covenant Health employees need to ensure they have completed Covenant Health Anaphylaxis Learning Module found on CLiC.

All other providers must have Anaphylaxis Management Guidelines in place.

- Additional information available in the Canadian Immunization Guide – Vaccine Safety

# Infection Prevention and Control (IPC)

IPC's mandate is to reduce the incidence of healthcare associated infections in patients, residents, and clients by:

- process and outcome surveillance
- outbreak identification and management
- consultation and education
- guideline, policy, and procedure development
- research

For more information go to the AHS IPC website at:

https://www.albertahealthservices.ca/info/page6410.aspx

# References


1. Alberta Health. Public Health Division. Alberta immunization Policy. (2024 June). Pneumococcal Vaccine, 20-valent Conjugate: Prevnar 20™.
2. Alberta Health, Government of Alberta. Alberta Public Health Disease Management Guidelines: Invasive Pneumococcal Disease. 2021; Available from: https://open.alberta.ca/dataset/67a2161b-d849-4fd4-8c02-9a1be7c65809/resource/9750e6df-ed5d-48b5-93b4-bd70a9b41b00/download/health-phdmg-pneumoccocal-disease-invasive-2021-09.pdf
3. Alexion Pharma GmbH. Soliris (eculizumab for injection) product monograph [Internet]. Available from: https://pdf.hres.ca/dpd_pm/00053762.PDF
4. Email communication from Pfizer. 27 May 2024, 28 May 2024.
5. National Advisory Committee on Immunization. Recommendations for public health programs on the use of pneumococcal vaccines in children, including the use of 15-valent and 20-valent conjugate vaccines [Internet]. 2024. Available from: https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/vaccines-immunization/national-advisory-committee-immunization-recommendations-public-health-programs-use-pneumococcal-vaccines-children-including-use-15-valent-20-valent-conjugate-vaccines/naci-statement-2024-03-1.pdf
6. National Advisory Committee on Immunization. Canadian Immunization Guide - Canada.ca [Internet]. Public Health Agency of Canada. 2023.Available from: https://www.canada.ca/en/public-health/services/canadian-immunization-guide.html
7. National Advisory Committee on Immunization. Public health level recommendations on the use of pneumococcal vaccines in adults, including the use of 15 valent and 20 valent conjugate vaccines [Internet]. 2023. Available from: https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/public-health-level-recommendations-use-pneumococcal-vaccines-adults-including-use-15-valent-20-valent-conjugate-vaccines.html
8. Pfizer Canada ULC. Prevnar 20™ Pneumococcal 20-valent Conjugate vaccine [Internet]. 2023. Available from: https://pdf.hres.ca/dpd_pm/00065729.PDF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# Contact Us

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CDC Intake Line: **1-855-444-2324**

Webpage: Provincial Partner Oversight Team (PPO Team) | Alberta Health Services