Polio Vaccine (IPV)

Revision Date: May 18, 2022

Rationale for Update:
- Addition of examples of communities and specific population groups with polio.

Please consult the Product Monograph¹ for further information about the vaccine.

<table>
<thead>
<tr>
<th><strong>IMOVAX® Polio (Vero Cell Origin)</strong></th>
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<tbody>
<tr>
<td><strong>Manufacturer</strong></td>
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<tr>
<td><strong>Licensed use</strong></td>
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<td><strong>Off-license use</strong></td>
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### Indications for use of provincially funded vaccine

**Children (2 months – 17 years of age):**
- Children previously unimmunized with polio vaccine but have already received diphtheria, pertussis and tetanus-containing vaccines.  
  **Note:** Combination vaccines containing diphtheria, pertussis, polio, tetanus and/or Hib should be used when indicated.
- Children travelling to countries where polio is known to be circulating (exporting and/or infected) and who are unimmunized or whose series is incomplete for age – an accelerated schedule can be considered.²³
  Refer to World Health Organization (WHO) Global Polio Eradication Initiative see [www://polioeradication.org/polio-today/polio-now/public-health-emergency-status](http://polioeradication.org/polio-today/polio-now/public-health-emergency-status) for current recommendations.⁴

**Adults (18 years of age and older):**

- **Primary Immunization – Low Risk:**
  - Students requiring polio vaccine are eligible until the end of grade 12 regardless of age.
  
  Due to the limited supply of polio vaccine and the low risk of exposure to polio in Alberta and Canada – the recommendation for the routine immunization of unimmunized adults is suspended until further notice.

Adults at increased risk of exposure as outlined below should continue to receive a primary series.

- **Primary Immunization – High Risk:**
  Adults in the following groups are at increased risk of exposure to poliovirus and should receive a primary series:
  - Health care workers (HCW) providing direct patient care who may be exposed to patients excreting the wild or vaccine strains of polio virus (contact with stool, fecal matter, or pharyngeal secretions).⁵
  - Laboratory workers handling specimens that may contain poliovirus.⁵
• Members of communities or specific population groups with disease caused by polio (e.g. refugees from countries where polio is circulating such as Afghanistan, Ukrainian evacuees).\(^5\)
• Close contact with those who may be excreting poliovirus (e.g. people working with refugees or people on humanitarian missions in countries where polio is circulating - exporting and/or infected).\(^5\)
• Family members or close contacts of internationally adopted infants who may have been immunized with OPV vaccine with the past 6 weeks.\(^5,6\)
• Individuals receiving travelers from areas where poliovirus is known to be circulating.\(^2,5\)
• Adults travelling for 4 weeks or greater to countries currently exporting and/or infected with polio.\(^2,5\)
  ➢ Refer to World Health Organization (WHO) Global Polio Eradication Initiative see www://polioeradication.org/polio-today/polio-now/public-health-emergency-status for current recommendations.\(^4\)
  **Note:** Provincially funded polio vaccine may be used for these adult travellers going to countries where polio is circulating and is only available through Alberta Health Services.

**Reinforcing vaccine dose:**
• Adults as indicated above who are at increased risk of exposure to poliovirus should receive a single life time reinforcing dose:

**Notes:**
• Due to the limited supply of IPV vaccine, dTap-IPV is the vaccine of choice for adults who require polio immunization only.
• For adult recipients of HSCT and SOT. See:
  ➢ **Immunization for Adult Hematopoietic Stem Cell Transplant Recipients**
  ➢ **Immunization for Adult Solid Organ Transplant Candidates and Recipients.**
• Due to the low risk of exposure to polio in Alberta and Canada for post-secondary student placements, post-secondary institutions are not expected to assess healthcare students for polio immunization. Once these students enter the workforce they will be assessed by Workplace Health and Safety staff for risk of exposure to polio at the clinical site where they will be employed and offered appropriate vaccine at that time.
• Children and adults intending to stay longer than four weeks in countries where polio is circulating should be referred to a Travel Clinic for assessment.

<table>
<thead>
<tr>
<th>Dose</th>
<th>0.5 mL</th>
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<tbody>
<tr>
<td>Route</td>
<td>Subcutaneous</td>
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<tr>
<td><strong>Schedule</strong></td>
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<td><strong>Primary Series:</strong></td>
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<tr>
<td>◆ Dose 1: day 0</td>
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<tr>
<td>◆ Dose 2: 8 weeks after dose 1 (interval between doses may be shortened to four weeks)</td>
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<tr>
<td>◆ Dose 3: 6 – 12 months after dose 2</td>
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<tr>
<td><strong>Reinforcing dose:</strong></td>
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<tr>
<td><strong>Children:</strong></td>
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<tr>
<td>◆ Booster dose of polio-containing vaccine is recommended for children 4 years of age usually as combined vaccine (dTap-IPV).</td>
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Notes:
- Single antigen polio vaccine is rarely recommended for children and only if they are assessed as up-to-date for diphtheria, tetanus and pertussis immunization but not up-to-date for polio.
- The reinforcing dose of polio is not required if the third dose was given on or after 4 years of age.
- **Oral Polio Vaccine (OPV)**
  - Any doses OPV received on or after April 1, 2016 are not considered a valid dose within the routine Alberta Immunization Schedule.
  - As of April 2016, trivalent polio vaccine (OPV) was replaced with either bivalent or monovalent OPV.
  - In order to ensure protection against all 3 poliovirus types, individuals presenting with a record of OPV received on or after this date will require re-immunization with IPV or an IPV-containing vaccine for any of these doses.7

**Adults (18 years of age and older):**
- One adult lifetime booster dose of polio-containing vaccine (at least 10 years after the primary series) is recommended for adults who are at increased risk of exposure to wild polioviruses (see INDICATIONS) and who completed the primary series in childhood.1,8,9

Note: Unless at increased risk of exposure to polio (see Indications), reinforcing doses of polio-containing vaccine are not routinely recommended for adults living in Canada.5

| Contraindications | Known severe hypersensitivity to any component of the vaccine or its container.1  
|                   | Anaphylaxis or other allergic reaction to a previous dose of vaccine containing polio antigen. |

| Precautions       | Each dose of vaccine may contain undetectable traces of neomycin, streptomycin and polymyxin B. |

| Possible reactions | **Common:**  
|                   | Redness and pain at the injection site  
|                   | Fever  
|                   | **Uncommon:**  
|                   | Injection site mass  

The following additional adverse events have been reported from post-marketing surveillance: lymphadenopathy, transient mild fever, allergic reactions, arthralgia, myalgia, convulsions, febrile convulsions, headache transient and mild paraesthesia, agitation, somnolence, irritability, rash and urticarial.1 Whatever the adverse event reported during post-marketing experience, its frequency remained very rare (less than 0.01%).1

| Pregnancy         | May be considered for pregnant women who require immediate protection and are at increased risk of exposure to wild poliovirus.2 Limited data have not revealed an increased risk of adverse events associated with polio vaccine administered to pregnant women.2 |

| Lactation         | May be administered to breastfeeding mothers when indicated.2 It is not known if Imovax® Polio is excreted in human milk.1 |

| Program Notes     | 1956 - IPV introduced into the routine childhood immunization program.  
|                   | 1962– Oral polio vaccine (OPV) administered in AB. |
- 2016 November
- Unimmunized adults at low risk of exposure not eligible for provincially funded vaccine.
- HCWs that might be exposed to patients excreting polio eligible for primary series and single life time reinforcement.
- Travellers to countries exporting and/or infected with polio and staying 4 weeks or longer eligible for primary series and reinforcing dose for adults.
- 2018 December – OPV doses given on or after April 1, 2016 are not considered valid in the routine AB immunization schedule and should be repeated.
- 2022 April 20 – Added indication for polio vaccine for individuals identified as Ukrainian evacuees.
  - Due to the limited supply of IPV vaccine, dTap-IPV is the vaccine of choice for adults who require polio immunization only.
- 2022 May 18 – Addition of examples of communities and specific population groups with polio.

**References**