How to determine whether doses of oral polio vaccine administered outside the United States are valid (trivalent OPV): ²

- Polio vaccine given outside the United States is valid if written documentation indicates that all doses were given after 6 weeks of age and the vaccine received was IPV or trivalent OPV (tOPV).
- If the record indicates OPV, and the dose was given prior to April 1, 2016, it can be counted as a valid tOPV dose.
- If the dose was administered April 1 through April 30, 2016, it can be counted as valid only if the record indicates that it was trivalent (tOPV).
- If the dose was administered on or after May 1, 2016, it should not be counted as a valid dose for the U.S. polio vaccination schedule because it was bivalent or monovalent vaccine rather than trivalent.
- Persons younger than 18 years of age with doses of OPV that do not count towards the U.S. vaccination requirements should receive IPV to complete the schedule according to the U.S. IPV schedule.

I. OREGON IMMUNIZATION PHARMACY PROTOCOL:
1. Check the ALERT Immunization Information System (IIS) to determine whether the patient needs this vaccine and any other vaccines.
2. Screen clients ≥7 years of age for contraindications.
3. Provide a current Vaccine Information Statement (VIS) and answer any questions.
4. Record all required data elements in the client’s permanent health record.
5. Verify needle length for IM injection.
6. Avoid injecting in the upper third of the deltoid muscle.
7. Both client and vaccinator must be seated for vaccine administration.
8. Give polio-containing vaccine as recommended. See section II:
   - Give single antigen IPV 0.5 mL IM or SQ as recommended for age and appropriate schedule.
   - See section II for schedules
9. Simultaneous vaccination: may be given with all routine vaccines
10. Ask client to remain seated on the premises for 15 minutes after vaccination to decrease the risk of injury should they faint.

<table>
<thead>
<tr>
<th>Minimum Acceptable Age*◊</th>
<th>Dose number in series</th>
<th>Preferred Interval to next dose</th>
<th>Minimum Acceptable Interval to next dose*◊</th>
</tr>
</thead>
<tbody>
<tr>
<td>7–18 years</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7–18 years</td>
<td>2</td>
<td>2 months after dose 1</td>
<td>4 weeks after dose 1^4</td>
</tr>
<tr>
<td>7–18 years</td>
<td>3</td>
<td>6 months after dose 2</td>
<td></td>
</tr>
</tbody>
</table>

* For retrospective checking, doses that violate the minimum spacing or age by 4 or fewer days need not be repeated. Doses administered 5 days or earlier than the minimum interval or age should be repeated as appropriate for age.³

◊ The preferred interval between the 2nd and 3rd doses of IPV is 2 months. However, if accelerated protection is needed, the minimum interval between doses 1, 2 or 3 is 4 weeks.⁴
II. B. Inactivated Polio Vaccine (IPOL®)\(^1\) Adult Schedule for Persons ≥18 Years of Age*

<table>
<thead>
<tr>
<th>DOSE</th>
<th>PRIMARY SCHEDULE</th>
<th>ACCELERATED SCHEDULE for HIGH-RISK PERSONS(^\diamond), §</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1–2 months from dose 1 to 2</td>
<td>4 weeks from dose 1 to 2</td>
</tr>
<tr>
<td>3</td>
<td>6–12 months from dose 2 to 3</td>
<td>4 weeks from dose 2 to 3</td>
</tr>
</tbody>
</table>

* Routine polio vaccination of persons ≥18 years of age who reside in the U.S. is not necessary due to childhood immunity and minimal exposure risks. However, IPV is recommended for certain adults at an INCREASED RISK OF EXPOSURE TO POLIO (e.g., international travelers, laboratory workers, healthcare personnel caring for polio cases, and contacts of cases during an outbreak). See Polio for Travelers standing order at: [1.usa.gov/PharmacyImmunizationProtocols](1.usa.gov/PharmacyImmunizationProtocols)

\(^\diamond\) If 8 weeks are available before protection is needed, 3 doses 4 weeks apart are recommended. If 4–8 weeks are available before protection is needed, 2 doses should be given 4 weeks apart.\(^4\)

\(^\§\) If <4 weeks are available before protection needed, one dose of IPV is recommended. In all cases, the remaining doses should be given later at recommended intervals. \(^4\)
III. LICENSED POLIO-CONTAINING VACCINES\(^1\).

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Vaccine components</th>
<th>Preferred Age Range</th>
<th>Thimerosal</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPOL®*</td>
<td>Inactivated polio virus (IPV) serotypes 1, 2 and 3</td>
<td>≥7 years</td>
<td>None</td>
</tr>
</tbody>
</table>

Less than 5 ng of neomycin, 200 ng of streptomycin, and 25 ng of polymyxin B per dose are present in vaccine.\(^1\)

IV. RECOMMENDATIONS FOR USE

See above for vaccine schedule and recommendations for use.

V. CONTRAINDICATIONS

- IPOL®.\(^1\)
  - A history of hypersensitivity to any component of the vaccine, including 2-phenoxyethanol, formaldehyde, neomycin, streptomycin, and polymyxin B.
  - No further doses should be given if anaphylaxis or anaphylactic shock occurs within 24 hours of administration of one dose of vaccine.

VI. PRECAUTIONS AND WARNINGS

IPOL® \(^1\)

- Although no causal relationship between IPOL vaccine and Guillain-Barré Syndrome (GBS) has been established, GBS has been temporally related to administration of another inactivated poliovirus vaccine. Deaths have been reported in temporal association with the administration of IPV.

VII. SIDE EFFECTS AND ADVERSE REACTIONS: IPOL®

Minor local reactions (pain, redness) most commonly occur following IPV. Because IPV contains trace amounts of streptomycin, polymyxin B, and neomycin, allergic reactions may occur in persons allergic to these antibiotics.\(^4\)
VIII. OTHER CONSIDERATIONS

A. Post-Polio Syndrome
After an interval of 15–40 years, 25%–40% of persons who contract paralytic poliomyelitis in childhood may experience muscle pain and exacerbation of existing weakness or develop new weakness or paralysis. This disease entity, referred to as post-polio syndrome, has been reported only in persons infected during the era of wild poliovirus circulation. This is not an infectious process. For further information contact:

- Post-Polio Health International; 4207 Lindell Blvd, Ste 110 St. Louis MO 63108-2915; 314-534-0475. info@post-polio.org and www.post-polio.org
- March of Dimes; Birth Defects Foundation; Community Services Department; 1275 Mamaroneck Ave.; White Plains, NY 10605; 914-428-7100.
- Katheryne Hoffman, M.D.: Roosevelt Warm Springs Rehabilitation and Specialty Hospital; (706) 655-5301. P.O. box 1000; 6135 Roosevelt Highway, Warm Springs, GA 30830 Admission criteria: (706) 655-5253 Warm Springs, GA 30830;

B. Vaccination of Internationally Adopted Children
- The recommended approach is to revaccinate adopted children with IPV according to the US schedule.6
- Alternative approaches are to order serologic testing for neutralizing antibody to poliovirus types 1, 2 and 3; or to administer a single dose of IPV, followed by serologic testing,6 children with protective titers against all three types do not need revaccination.6

C. Hematopoietic stem cell transplant (HSCT) recipients: Antibody titers to vaccine-preventable diseases (e.g., tetanus, poliovirus, measles, mumps, rubella and encapsulated bacteria) decrease 1–4 years after autologous or allogeneic HCT if the recipient is not revaccinated. HCT recipients of all ages are at increased risk. Revaccination with 3 doses of IPV is recommended 6–12 months after HSCT. 3, 7

D. Adverse Events: epinephrine hydrochloride solution (1:1,000) and other appropriate agents and equipment must be available for immediate use in case of anaphylactic or acute hypersensitivity reaction.1

E. Immunocompromised: individuals with altered immunocompetence may have reduced immune responses.1

F. Lactation: It is not known whether IPOL is/ are excreted in human milk. Use with caution in nursing mothers.1

G. Oral polio vaccine (OPV) has been unavailable in the United States since 1999.4
IX. Storage and Handling
All clinics and pharmacies enrolled with the Vaccines for Children (VFC) Program must immediately report any storage and handling deviations to the Oregon Immunization Program at 971-673-4VFC (4823).

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Temperature</th>
<th>Storage Issues</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPOL®¹</td>
<td>Store at 2°–8°C</td>
<td>Do not use if vaccine has been frozen. Report to health educator</td>
<td>Protect from light</td>
</tr>
</tbody>
</table>

X. ADVERSE EVENT REPORTING

A pharmacist who administers any vaccine must report the following elements to the OHA ALERT Immunization Information System in a manner prescribed by OHA within 15 days of administration. This replaces the former requirement to notify the primary health care provider. A pharmacist is not required to notify the primary health care provider. Oregon Administrative Rule 855-019-0290-(2)(3).⁸

VAERS Reporting Table*:
[https://vaers.hhs.gov/docs/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf](https://vaers.hhs.gov/docs/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf)

<table>
<thead>
<tr>
<th>Inactivated Polio</th>
<th>A. Anaphylaxis or anaphylactic shock (7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B. Shoulder injury related to vaccine administration (7 days)</td>
</tr>
<tr>
<td></td>
<td>C. Vasovagal syncope (7 days)</td>
</tr>
<tr>
<td></td>
<td>D. Any acute complication or sequelae (including death) of the above event (interval - not applicable)</td>
</tr>
<tr>
<td></td>
<td>E. Events described in manufacturer’s package insert as contraindications to additional doses of vaccine (interval - see package insert)</td>
</tr>
</tbody>
</table>
**Oral Polio (OPV)**

**Not available in the U.S.**

May be administered during international travel.

<table>
<thead>
<tr>
<th>A. Paralytic polio</th>
<th>B. Vaccine-strain polio viral infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>o in a non-immunodeficient recipient (30 days)</td>
<td>o in a non-immunodeficient recipient (30 days)</td>
</tr>
<tr>
<td>o in an immunodeficient recipient (6 months)</td>
<td>o in an immunodeficient recipient (6 months)</td>
</tr>
<tr>
<td>o in a vaccine-associated community case (interval - not applicable)</td>
<td>o in a vaccine-associated community case (interval - not applicable)</td>
</tr>
</tbody>
</table>

| C. Any acute complication or sequelae (including death) of above events (interval - not applicable) |
| D. Events described in manufacturer’s package insert as contraindications to additional doses of vaccine (interval - see package insert) |

**POLIO CASE INVESTIGATION:** Notify Acute and Communicable Disease and Prevention (ACDP) 971-673-1111 immediately, day or night.

Effective date: March 21, 2017. The Reportable Events Table (RET) reflects what is reportable by law (42 USC 300aa-25) to the Vaccine Adverse Event Reporting System (VAERS) including conditions found in the manufacturer package insert. In addition, healthcare professionals are encouraged to report any clinically significant or unexpected events (even if not certain the vaccine caused the event) for any vaccine, whether or not it is listed on the RET.

To request this material in an alternative format (e.g., Braille) or to clarify any part of the above order, contact the Oregon Health Authority Immunization Program at 971.673.0300 and 711 for TTY. For other questions, consult with the vaccine recipient’s primary health care provider or a consulting physician.

Electronic copy of this protocol available at: [1.usa.gov/PharmacyImmunizationProtocols](1.usa.gov/PharmacyImmunizationProtocols)
REFERENCES

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   3967  Accessed 16 August 2018.