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- **ALERT: Risk of Vaccine-Derived Polio in Canada**

FROM:

Rebecca Shalansky, MD MPH CCFP FRCPC
Associate Medical Officer of Health

Key Messages:

- Peel Public Health has been notified of an outbreak of vaccine-derived polio in a large refugee complex in Kenya.
- Include polio in your differential diagnosis for anyone with compatible symptoms, including paralysis, especially if the patient has recently returned from international travel or is a newcomer to Canada.
- Collect specimens for laboratory testing if polio is suspected via culture or PCR.
- Report suspected cases of polio **immediately** to Peel Public Health at 905-799-7700.
- Ensure all patients and office staff are up to date with polio vaccination.

ALERT: Risk of Vaccine-Derived Polio in Canada

Peel Public Health has been notified of a large outbreak of vaccine-derived polio in Kenya with links to circulating strains in Somalia:

<https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON479>.

This is an opportunity for health care providers to ensure their patients and staff, including new arrivals to Canada and those traveling internationally, are up-to-date with polio vaccine and other routine vaccinations.

Polio in Canada

- Canada was certified polio free by the WHO in 1994.
- Cases of wild polio virus (WPV) in Canada reported since that time have been associated with importations from countries where the virus

was still circulating. Canada has not detected WPV since 1996.

- Since 2004, there have been a few cases of vaccine-derived poliovirus (VDPV) all of which were imported from locations outside of Canada where oral polio vaccine (OPV) was used.

Clinical Presentation and Management of Polio

- Polio is highly infectious and transmitted via the fecal-oral, and rarely, respiratory routes.
- In most infected people polio does not cause any symptoms and can go unrecognized.
- In about 25% of cases, symptoms can include: fever, sore throat, headache, malaise, gastrointestinal symptoms (abdominal pain, nausea, vomiting). Aseptic meningitis can also occur in approximately 1% of cases.
- In less than 1% of cases, paralysis can occur. Paralysis can be partial or full and is generally asymmetric. The time from exposure to onset of paralysis is approximately 7 to 21 days.
- There is no specific medication for polio and care is supportive in nature.

Testing for Polio

- Polio testing includes isolation of poliovirus from a culture or detection of poliovirus-specific RNA by PCR from an appropriate clinical specimen (stool, viral throat swab or CSF).
- Serology testing is not recommended for diagnosis of polio.
- For more information, see Public Health Ontario enterovirus testing:
<https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Enterovirus#:~:text=Respiratory%20specimens,in%20a%20sterile%20dry%20container.>

- If testing for a suspect case of polio, notify Peel Public Health at 905-799-7700.

Reporting Polio

- Polio and all cases of acute flaccid paralysis (AFP) are a reportable disease under the *Health Protection and Promotion Act*.
- Report suspected cases of polio and all cases of AFP **immediately** to Peel Public Health at 905-799-7700.
 - Do not wait for laboratory confirmation, especially in the case of paralysis.

Polio Vaccination

- There are two types of polio vaccines in use globally, the inactivated poliovirus vaccine (IPV) and the oral poliovirus vaccine (OPV). The OPV contains live weakened virus and can mutate to cause VDPV.
- In Canada, only IPV, which cannot cause VDPV, has been used since 1995/1996.
- Routine polio immunization of infants and children: Administer DTaP-IPV-Hib vaccine at 2, 4, 6 and 12 to 23 months of age. Subsequently, administer a booster dose of either DTaP-IPV or Tdap-IPV vaccine at 4 to 6 years of age (school entry).
- For children who are unimmunized or incompletely immunized: complete the vaccine series with IPV- containing vaccine as appropriate for age.
- For adults previously unimmunized with polio vaccine: administer a primary series of IPV-containing vaccine if a primary series of tetanus toxoid-containing vaccine is being given or if the adult is at increased risk for exposure to poliovirus; otherwise, administer polio in a combination vaccine with routine tetanus and diphtheria booster doses.
- For adults previously immunized with polio vaccine, who are at increased risk of exposure to polio (e.g., those travelling to, or planning to work in areas that have wild polio or vaccine-derived

polio outbreaks): a single lifetime booster dose of IPV-containing vaccine is recommended.

- Check the Canadian Immunization Guide: <https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html>. to evaluate the validity of previously received polio vaccine for persons new to Canada.

Additional Resources

- Health Canada: <https://www.canada.ca/en/public-health/services/diseases/poliomyelitis-polio/health-professionals.html>.
- Public Health Ontario enterovirus testing: <https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Enterovirus#:~:text=Respiratory%20specimens,in%20a%20sterile%20dry%20container.>
- Canadian Immunization Guide: Catch-up vaccination schedule: <https://www.canada.ca/en/public-health/services/provincial-territorial-immunization-information/provincial-territorial-routine-vaccination-programs-infants-children.html>.
- Ontario Immunization Schedule: https://www.health.gov.on.ca/en/pro/programs/immunization/docs/Publicly_Funded_ImmunizationSchedule.pdf.