



# Department of Health

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**TO:** Healthcare Providers, Hospitals, Clinical Laboratories, and Local Health Departments (LHDs)

**FROM:** New York State Department of Health (NYSDOH), Division of Epidemiology

## **HEALTH ADVISORY: Poliomyelitis Case in Rockland County, New York State**

*For clinical staff in Epidemiology/Infection Control, Emergency Department, Infectious Disease, Neurology, Nursing, Internal Medicine, Pediatrics, Family Medicine, Intensive Care, Pharmacy, Laboratory Services, and all patient care areas.*

### **Summary of Case**

- A case of poliomyelitis has been identified in Rockland County, New York.
- An adult individual presented to an emergency department with respiratory symptoms, fever, neck stiffness, and back pain. The symptoms progressed to include paralysis.
- Samples were tested for several pathogens as part of the evaluation for [acute flaccid myelitis \(AFM\)](#). **A stool sample tested positive for poliovirus.**
- Subsequent sequencing showed that the strain was NOT wild-type virus but rather was revertant poliovirus Sabin type 2.
- Poliovirus Sabin type 2 is used in some formulations of oral polio vaccine (OPV). OPV is no longer licensed, available, or administered in the United States and has not been used in the United States since 2000. Rather, inactivated polio vaccine (IPV) is used in the US.
- The individual was not vaccinated against polio.
- There is an ongoing investigation to determine community risk.

### **Clinical Presentation of Poliomyelitis**

- Most people with poliovirus infection have no symptoms or only a non-specific febrile illness. In rare cases, a person will develop acute flaccid weakness of the limbs.
- Progression of weakness is rapid and often associated with fever and muscle pain.
- Weakness is typically asymmetric and more severe proximally than distally.
- Deep tendon reflexes are absent or diminished.
- Bulbar paralysis can result in respiratory distress and often requires mechanical ventilation.
- There may be a history of fever, sore throat, nausea, and malaise up to one week before weakness onset.
- Polio is a disabling and life-threatening disease which can affect a person's brain and spinal cord, leading to paralysis, meningitis, and paresthesia.
- There can be long-term sequelae even decades after the original infection.
- Polio has been eliminated from the United States, but it still occurs in other parts of the world, especially where there are low vaccination rates. Recently, cases of polio have been identified in several countries in Europe, Asia, and Africa, and poliovirus has been detected in wastewater in the UK.

- The incubation period is 3 to 6 days for non-paralytic poliomyelitis and 7 to 21 days for onset of paralysis in paralytic poliomyelitis.
- Transmission is fecal-oral, respiratory, or oral-oral.
- It is highly infectious and is most transmissible up to 14 days before and after onset of symptoms, although ongoing fecal shedding can occur for weeks.
- The best way to protect your patients is to maintain high immunity against polio in the population through vaccination, along with rapid identification and isolation of suspected polio cases.

### Guidelines for Healthcare Providers

- Poliomyelitis should be considered in the differential for patients with acute flaccid weakness, particularly if they are not vaccinated for polio.
- In the event of a patient with known or suspected paralytic or non-paralytic polio:
  - Ideally, only healthcare workers **with evidence of complete polio immunization** should provide care to the patient. For adults, this would be at least three documented doses of poliovirus-containing vaccine. If healthcare worker polio immunization status is not tracked, then any healthcare workers who know or suspect that they have not received polio immunizations (e.g., as part of routine childhood immunizations) should be excluded from care of the patient. Efforts should be made to document polio immunization of healthcare workers whenever possible, especially when polio is known or high on the differential diagnosis.
  - Standard and Contact Precautions are recommended while evaluating a potential or confirmed case, and facility infection control should be notified immediately. The patient should be evaluated for flaccid weakness by a neurologist.
  - **Immediately notify the local health department** where the patient resides and/or contact the New York State Department of Health.
- Polio testing is available at NYSDOH [Wadsworth Center](#). After consulting with the local health department where the patient resides, specimens should be collected as follows:
  - **Nasopharyngeal swab in viral transport media**
  - **Oropharyngeal swab in viral transport media**
  - **CSF** (2-3 cc, if available, in sterile collection tube)
  - **Serum** (acute and convalescent), collected **prior to** treatment with IVIG, (2-3 cc in red or tiger-top tube)
  - **Two stool specimens** (two quarter-sized amounts in a sterile wide-mouth container) collected 24 hours apart
  - An [Infectious Disease Requisition](#) form should accompany all specimens sent to Wadsworth.
  - Specimens should be stored refrigerated and shipped on frozen gel packs.
- Other routine pathogen-specific testing should continue at hospital laboratories as determined by the patient's clinical picture.

### Polio Immunization Recommendations

- Children, adolescents, and adults who are unvaccinated or do not know if they were vaccinated are at risk for disease if exposed and should be offered an outbreak dose of IPV if they reside in an area with possible community transmission of poliovirus or if they have other potential exposures.
- Previously vaccinated individuals who are at risk for exposure because of their community of residence or who have had close contact with a patient infected with polio virus should also receive a booster dose of IPV.
- Polio vaccine may be given to both children and adults as a stand-alone vaccine (not combined) in an outbreak setting.

- Polio vaccine can be given during pregnancy and is recommended if the individual is at risk of exposure. Pregnant persons can discuss the risks and benefit of IPV with their healthcare provider.
- Polio vaccine may be given at the same time as other vaccines.
- IPV, the only polio vaccine available in the US, is highly effective, with 90% or more of vaccine recipients developing protective antibody levels to all three poliovirus types after 2 doses, and 99% developing protective antibody levels following 3 doses.
- Unvaccinated adults at risk for poliovirus infection should get three doses of IPV: two doses separated by 1 to 2 months, and a third dose 6 to 12 months after the second dose. Often during an outbreak, the first dose may be administered by a public health agency but follow up doses can occur where the patient receives regular health care.
- The schedule for polio vaccination for unvaccinated or under-vaccinated older children through age 17 years is 2 doses of IPV separated by 4–8 weeks, and a third dose 6–12 months after the second dose. For details and age groups, refer to the [ACIP IPV catch-up vaccine table](#).
- If you are interested in obtaining IPV for your patients, please contact the Bureau of Immunization via email at [immunize@health.ny.gov](mailto:immunize@health.ny.gov) or by phone at (518) 473-4437.

### Acute Flaccid Myelitis

- AFM is a rare but serious paralytic condition that adversely affects the nervous system, specifically the gray matter of the spinal cord, which in turn causes muscles and reflexes in the body to weaken.
- AFM can be difficult to diagnose because it shares many symptoms with other neurological diseases, including transverse myelitis, Guillain-Barre syndrome, and polio.
- Poliomyelitis should be considered as part of the differential diagnosis.
- Most cases are seasonal and occur between August and November. Full details can be found at NYS recent AFM Health Advisory: [https://apps.health.ny.gov/pub/ctrl/docs/alertview/postings/NYSDOH\\_AFM\\_Health\\_Advisory\\_06242022\\_FINAL\\_1656100564923\\_0.pdf](https://apps.health.ny.gov/pub/ctrl/docs/alertview/postings/NYSDOH_AFM_Health_Advisory_06242022_FINAL_1656100564923_0.pdf).
- Report suspected cases promptly to the NYSDOH at 518-473-4439 during business hours or 866-881-2809 evenings, weekends, and holidays or via email at [AFM@health.ny.gov](mailto:AFM@health.ny.gov) or [BCDC@health.ny.gov](mailto:BCDC@health.ny.gov).

### Resources

- CDC Suspect Polio Factsheet: <https://www.cdc.gov/polio/pdf/Polio-Fact-Sheet-Suspect-Polio-508.pdf>
- ACIP Recommendations for Polio Vaccination: <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/polio.html>
- CDC Polio Vaccination: What Everyone Should Know: <https://www.cdc.gov/vaccines/vpd/polio/public/index.html>
- CDC Polio Vaccine Information Statements: <https://www.cdc.gov/vaccines/hcp/vis/vis-statements/ipv.html>
- CDC Polio Education Materials: <https://www.cdc.gov/vaccines/vpd/polio/public/index.html#educational-materials>
- Vaccine Derived Polio FAQ: <https://www.cdc.gov/vaccines/vpd/polio/hcp/vaccine-derived-poliovirus-faq.html>
- Clinicians with questions can contact the NYSDOH at 1-866-881-2809 evenings, weekends, and holidays. In New York City clinicians may contact the healthcare provider access line at 1-866-692-3641.