

## Summary

On September 13, 2022, the Centers For Disease Control and Prevention (CDC) announced that the United States met the World Health Organization's (WHO) criteria for circulating vaccine-derived poliovirus (cVDPV) after polioviruses were found in New York, both from a case of paralytic polio in an unvaccinated adult in Rockland County and in several wastewater samples from communities near the patient's residence. While polio has not been detected in Delaware or in Delaware wastewater, the CDC and the Delaware Division of Public Health (DPH) are encouraging all persons who are not vaccinated or not fully vaccinated against poliovirus receive the vaccine as soon as possible to prevent the spread of polio in unprotected populations. The polio vaccine is routinely recommended for children in the United States, but it is important to verify the immunity status for adults as well.

## Background

In July 2022, CDC was notified of a case of polio in an unvaccinated individual from Rockland County, New York, caused by [vaccine-derived poliovirus type 2](#). It is important for providers to understand that people cannot get polio from the polio vaccine (IPV) used in the U.S.

Vaccine-derived poliovirus is a strain related to the weakened live poliovirus contained in the oral polio vaccine (OPV). If allowed to circulate in under- or unimmunized populations, it is possible for the weakened virus to revert to a form that causes illness and paralysis. The OPV has not been used in the United States since 2000, when the inactivated poliovirus vaccine (IPV) became the recommended version of immunization. Subsequently, poliovirus was detected in wastewater samples in New York with enough genetic variation from the case to meet the case definition for vaccine-derived poliovirus and WHO's criteria for cVDPV. The CDC is consulting with the New York State Department of Health on their investigation. This does not change CDC recommendations for polio vaccination. CDC urges everyone who is not fully vaccinated to complete the polio vaccination series as soon as possible.

The last case of wild polio that originated from within the United States occurred in 1979, and the last case of wild polio to be imported into the U.S. occurred in 1993. It is important to note that [poliovirus infections still occur](#) in some countries and could easily be brought into the United States. In the last decade, many polio-free countries have had cases of polio imported through international travel.

Although poliovirus is no longer endemic in the United States, it is important that health care professionals rule out polio infection in cases of unexplained acute flaccid paralysis (AFP) that are clinically compatible with polio. This is particularly important to those with anterior myelitis to ensure that importation of poliovirus is quickly identified and investigated.

Most people infected with poliovirus will not have any visible symptoms. About one out of four people will have flu-like symptoms. These symptoms usually last two to five days, then go away on their own.

Fewer than 1% of people will have weakness or paralysis in their arms, legs, or both. The paralysis can lead to permanent disability and death. The poliovirus incubation period for nonparalytic symptoms is 3 to 6 days. The onset of paralysis usually occurs seven to 21 days after infection.

## **Recommendations**

CDC urges everyone who is not fully vaccinated to complete the polio vaccination series as soon as possible.

All children should continue receive the routine, age-appropriate, polio vaccine series as recommended by the CDC and the Advisory Committee on Immunization Practices (ACIP).

Most Adults (persons aged >18 years) in the United States are presumed to be immune to poliovirus due to previous routine childhood immunization but if they are not vaccinated the recommendation vary depending on the available documentation.

Adults who are unvaccinated or without any documentation of previous polio vaccination should be given three doses of IPV at these recommended intervals:

- Two doses separated by one to two months
- A third dose six to 12 months after the second dose

Adults who are incompletely vaccinated or previously received one or two doses of polio vaccine (either IPV or tOPV) should receive the remaining doses of IPV to complete the three-dose series at the recommended interval:

If the adult has received Dose 1, and

- It has been  $\geq 4$  weeks since Dose 1, then give Dose 2 today. Dose 3 (final) should be given at least 6 months after Dose 2.
- It has been  $< 4$  weeks since Dose 1, then wait to give Dose 2 at least 4 weeks after Dose 1.

If the adult has received Dose 2 and

- It has been  $\geq 6$  months since Dose 2, then give Final Dose 3 today. This will complete the person's primary polio vaccination series.
- It has been  $< 6$  months since Dose 2, then wait to give Final Dose 3 at least 6 months after Dose 2

Adults who have had three or more doses of polio vaccine in the past and are at higher risk of exposure to poliovirus can get one lifetime booster dose of IPV. In some circumstances, when there is not enough time to give three doses of IPV according to the above recommended intervals, then an accelerated schedule can be used:

- If protection is needed in  $\geq 8$  weeks, three doses of IPV can be administered at least 4 weeks apart (e.g., at weeks 0, 4, and 8).
- If protection is needed in  $\geq 4$  but  $< 8$  weeks, two doses of IPV should be administered at least 4 weeks apart (e.g., at weeks 0 and 4).
- If protection is needed in fewer than 4 weeks, a single dose of IPV should be administered.

## Reporting

Paralytic polio has been classified as “**Immediately notifiable, Extremely Urgent,**” which requires that local and state health departments contact CDC **within four hours**.

Non-paralytic polio has been classified as “**Immediately notifiable, Urgent,**” which requires that local and state health departments contact CDC **within 24 hours**.

All Delaware physicians, laboratories and other health care providers are [required by regulations](#) to report patients with the following conditions, either based on clinical diagnosis or laboratory confirmation, to the Office of Infectious Disease Epidemiology (OIDE) as listed at [Reportable Diseases in Delaware - Delaware Health and Social Services - State of Delaware](#). Reporting enables appropriate public health follow-up for your patients, helps identify outbreaks, and provides a better understanding of disease trends in Delaware.

Cases can be reported to the DPH Office of Infectious Disease Epidemiology (OIDE) by calling 302-744-4990 (normal business hours) or 1-888-295-5156 (outside of normal business hours). You may also complete a Notifiable Disease Report PDF Form and mail the form as directed, fax the form to DPH at 302-622-4149 or email to [reportdisease@delaware.gov](mailto:reportdisease@delaware.gov). The form can be found online at <https://dhss.delaware.gov/dhss/dph/dpc/rptdisease.html>.

## More information

• CDC Media Release

- o [United States confirmed as country with circulating vaccine-derived poliovirus](#)
- MMWR Report regarding the detection of poliovirus in New York
  - o [Public Health Response to a Case of Paralytic Poliomyelitis in an Unvaccinated Person and Detection of Poliovirus in Wastewater — New York, June–August 2022](#)
- CDC Polio Pages
  - o [What is Polio?](#)
  - o [Vaccine-Derived Poliovirus](#)
  - o [Polio Vaccination: What Everyone Should Know](#)
  - o [Polio Vaccines for Children](#)
  - o [Polio Vaccination Recommendations for Specific Groups](#)
  - o [Polio: For Healthcare Providers](#)
  - o [Polio: For Travelers](#)
  - o [NCIRD Polio Investigation in New York 2022](#)
- WHO Polio Page
  - o [Poliomyelitis](#)
- Immunize.org
  - o [Ask the Experts: Polio](#)

## References

1. Centers for Disease Control and Prevention. (2022). **Polio vaccination recommendations for specific groups**. Retrieved 09/15/2022, from <https://www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html>
2. Centers for Disease Control and Prevention. (2022). **Poliomyelitis: For healthcare providers**. Retrieved 09/15/2022, from Poliomyelitis: For Healthcare Providers

3. Centers for Disease Control and Prevention. (2022). **Vaccine-derived poliovirus**. Retrieved 09/15/2022, from <https://www.cdc.gov/vaccines/vpd/polio/hcp/vaccine-derived-poliovirus-faq.html>
4. Centers for Disease Control and Prevention. (September 13, 2022). **United States confirmed as country with circulating vaccine-derived poliovirus**. Retrieved 09/15/2022, from <https://www.cdc.gov/media/releases/2022/s0913-polio.html>