



June, 2022. Polio Reported in the United States

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By now, the majority of you in our polio survivor community have already heard the news that a case of acute polio has recently been confirmed in Rockland County, New York. More information will likely come forward, but what we currently know is that one of the United States' newest polio survivors is an adult male who was unvaccinated, developed the first symptoms in June, and was infected with an oral polio vaccine-derived type 2 poliovirus.

Reportedly he had not traveled abroad, although some reports now are saying he had traveled to Europe. The type of poliovirus that caused his paralysis is what is called "circulating vaccine-derived poliovirus" (cVDPV). That means it was imported into the U.S. from somewhere in the world where the oral polio vaccine is still used. It has become more common, although still rare, in parts of the world where the oral (Sabin) polio vaccine is used, where there are large numbers of unvaccinated or under vaccinated individuals, and especially where there is inadequate sanitation and access to clean water.

Globally, there were 1,113 children diagnosed with paralysis from polio caused by the cVDPV viruses in 2020, 689 in 2021, and 359 as of 9/28/22. These individuals, mostly children, are just as paralyzed as they would have been had they been infected with the "wild"/occurring-in-nature polioviruses. This NY case demonstrates that we, in the developed world, can still see cases of acute polio anywhere that there is inadequate immunity to polio. A recent report that sewage samples in London had shown presence of circulating vaccine-derived poliovirus type 2 (a similar type to that implicated in the NY case) stimulated concern that polio could show up in parts of the world that have not seen polio for decades.

Organizations dedicated to polio eradication such as Rotary International and the Global Polio Eradication Initiative (GPEI) - of which Rotary is a partner, often quote the sayings, "Any form of poliovirus anywhere is a threat to children everywhere" and "Polio is just an airplane ride away." Most polio survivors do not need to be convinced of the value of polio vaccines because they have seen the devastating effects these nasty viruses can have.

A course of three doses of any form of polio vaccine has been demonstrated to be 99% effective in preventing polio. There are several advantages to using the oral polio vaccine. A novel oral polio vaccine type 2 (nOPV2) has been developed that is much less likely to mutate when out in the environment, and cause vaccine-derived disease as a result.

The United States stopped using all oral polio vaccine in 2000 and switched back to the injectable (killed) (Salk) polio vaccine. There is NO risk of cVDPV when the polio shots are used instead of oral polio vaccine drops (or remember the "sugar cubes" with the polio vaccine drops were placed on top) Some of you who have traveled to developing countries in the past few years may have been surprised to learn that an additional booster dose of polio vaccine was recommended before travel to certain countries even though you had had the disease and had been fully immunized for polio. This is an extra precaution because of continued . . .

the theoretical risk of exposure to wild poliovirus or the circulating vaccine-derived poliovirus.

For the past five years, wild poliovirus cases (Type 1) have been confined to Pakistan and Afghanistan, but in late 2021 and in 2022 there has been one case in Malawi and 6 in Mozambique. As of 7/28/22 there have been 27 individuals paralyzed by wild polio virus. Circulating vaccine-derived polioviruses (mostly Type 2) have been reported in nearly 30 countries including in many parts of Africa, Southeast Asia, Israel, Ukraine, and the Arabian Peninsula.

The bottom line is that this case in New York presents *no* threat to those who have been immunized but is a reminder that polio is not yet “gone”. It is unfortunate that this man now is suffering from a vaccine- preventable illness! Although this will be life-changing for this young man and his family, the good news is that despite poliovirus being detected in the wastewater of several counties around the New York City area to date there have been no more confirmed cases of paralysis caused by polio.

For up-to-date information about polio and the eradication efforts, go to www.polioeradication.org

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