



Vaccine-derived poliovirus cases exceed wild types

29 cases of wild poliovirus were reported in 2018, an increase of seven on the previous year. As in 2017, the cases all occurred in Afghanistan and Pakistan. "The risk of global complacency developing increases as... eradication becomes a tangible reality", cautioned the WHO Emergency Committee on the global spread of poliovirus at its most recent meeting last November.

2018 also saw 101 cases of circulating vaccine-derived poliovirus (cVDPV). It was the second successive year in which cases of cVDPV exceeded those of wild poliovirus. The Democratic Republic of Congo, Kenya, Niger, Nigeria, and Somalia were all affected by cVDPV2. WHO believes that the strain that spread from Somalia to Kenya could have been circulating for up to 4 years.

Type 2 wild poliovirus was eradicated in 1999. In 2016,

155 countries switched from the trivalent oral polio vaccine to the bivalent vaccine. "We now have this cohort of children who do not have immunity to type 2 poliovirus", explains Nicholas Grassly (Imperial College London, UK). He thinks that, if the situation worsens, WHO might consider a partial reintroduction of serotype 2 oral vaccine. However, that carries the risk of new cVDPVs further down the line. "We do not want to get into a situation where we are endlessly responding to outbreaks of vaccine-derived poliovirus", says Grassly.

The Global Polio Eradication Initiative's Oliver Rosenbauer stresses that cases of cVDPV are not running out of control. "The difference is that wild poliovirus is at such low levels that cVDPV is taking on a more visible importance", he told *The Lancet Infectious Diseases*. The

outbreaks have occurred in regions with low routine immunisation rates. Conflict, security concerns, and mass population movement constrain a country's ability to tackle any kind of poliovirus. Somalia is especially susceptible; gaps in surveillance systems in neighbouring Djibouti and Ethiopia mean that, if cVDPV were to spread, it might not be immediately detected.

"We always knew we would have to address cVDPV as part of the eradication endgame", notes Rosenbauer. The solution is well known: switching from the oral polio vaccine to the inactivated vaccine will eliminate the risk of cVDPV. "But we cannot stop using the oral vaccine until we have eradicated wild poliovirus, so we need to do that as quickly as possible", says Rosenbauer.

Talha Burki



Infectious disease surveillance update

Polio in Mozambique

An outbreak of circulating vaccine-derived poliovirus type 2 (cVDPV2) has been confirmed in Mozambique, following the detection of two genetically linked isolates. The first was in a 6-year-old girl with no history of vaccination who was from Molumbo district in Zambézia province. The second isolate was from a community contact of the first patient. The last confirmed case of VDPV2 in Mozambique was a 5-year-old boy from Zambézia in January, 2017. The Global Polio Eradication Initiative, their partners, and health authorities will conduct field investigations and risk assessments to plan for immunisation and outbreak response.

Measles in Ukraine

54 481 cases of measles were reported in Ukraine in 2018, including 34 277 cases in children and 20 204 in

adults. In total, 16 patients died from their illness: 12 children and four adults. Nearly 12 000 cases were reported from Lviv, 8000 of which were in children. Of the patients in Lviv, 7000 had no record of immunisation, and the rest had received only a single dose of measles-containing vaccine. Health officials are implementing emergency measures to increase vaccination coverage.

Dengue in Jamaica

The Government of Jamaica reported 123 cases of dengue in December, 2018. This is the first month that the number of cases has crossed the epidemic threshold. 830 cases of dengue, including two deaths, were reported in 2018, in contrast to 70 cases in 2017. Most cases were reported in Kingston, St Andrew, St Catherine, and Westmoreland. Officials have allocated additional

funding to support enhanced vector control programmes, including hiring 500 temporary workers to identify and eliminate mosquito breeding sites.

Ebola virus in DR Congo

Since the latest outbreak was declared in August, 2018, 630 cases of Ebola virus disease have been reported in North Kivu and Ituri provinces in DR Congo. As of Jan 9, 2019, 582 confirmed and 48 probable cases have been reported. 385 patients have died from their illness and 226 have recovered. As of Jan 9, 122 cases were also under investigation. Two new deaths were reported in Biena and Katwa (both in North Kivu), and both deaths occurred outside of health facilities. Since Aug 8, 2018, 58 085 people have been vaccinated with the rVSV-ZEBOV vaccine.

Ruth Zwizwai

For more on **polio in Mozambique** see <http://polioeradication.org/where-we-work/mozambique/>

For more on **vaccine-derived poliovirus** see **News** page 140

For more on **measles in Ukraine** see <http://outbreaknewstoday.com/ukraine-54k-measles-cases-2018-vaccination-campaign-start-february-28330/>

For more on **dengue in Jamaica** see <http://outbreaknewstoday.com/jamaica-dengue-fever-surpasses-epidemic-threshold-govt-allocates-additional-money-battle-virus-18294/>

For more on **Ebola virus disease in DR Congo** see <https://www.promedmail.org/post/6252695>