Polio outbreak in the Democratic Republic of Congo

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In the Democratic Republic of the Congo (DRC), two separate circulating vaccine-derived poliovirus type 2s (cVDPV2s) have been confirmed. The first cVDPV2 strain has been isolated from two acute flaccid paralysis (AFP) cases from two districts in Haut-Lomami province, with onset of paralysis on 20 February and 8 March 2017. The second cVDPV2 strain has been isolated from Maniema province, from two AFP cases (with onset of paralysis on 18 April and 8 May 2017) and a healthy contact in the community.

Public health response
The Ministry of Health, supported by WHO and partners of the Global Polio Eradication Initiative, has completed a risk assessment, which included an evaluation of population immunity and the risk of further spread.

Outbreak response plans are currently being finalized, consisting of strengthening surveillance, including active case searching for additional cases of AFP, and supplementary immunization activities with monovalent oral polio vaccine type 2 (mOPV2), in line with internationally agreed outbreak response protocols.

Surveillance and immunization activities are being strengthened in neighbouring countries.

WHO risk assessment
WHO assesses the risk of further national spread of these strains to be high, and the risk of international spread to be medium.

The detection of cVDPV2s underscores the importance of maintaining high routine vaccination coverage everywhere, to minimize the risk and consequences of any poliovirus circulation. These events also underscore the risk posed by any low-level transmission of the virus. A robust outbreak response as initiated is needed to rapidly stop circulation and ensure sufficient vaccination coverage in the affected areas to prevent similar outbreaks in the future. WHO will continue to evaluate the epidemiological situation and outbreak response measures being implemented.

WHO advice
It is important that all countries, in particular those with frequent travel and contacts with polio-affected countries and areas, strengthen surveillance for AFP cases in order to rapidly detect any new virus importation and to facilitate a rapid response. Countries, territories and areas should also maintain uniformly high routine immunization coverage at the district level to minimize the consequences of any new virus introduction.

WHO’s International Travel and Health recommends that all travellers to polio-affected areas be fully vaccinated against polio. Residents (and visitors for more than four weeks) from infected areas should receive an additional dose of OPV or inactivated polio vaccine within four weeks to 12 months of travel. As per the advice of the Emergency Committee convened under the International Health Regulations (2005), efforts to limit the international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC). Countries affected by poliovirus transmission are subject to Temporary Recommendations. To comply with the Temporary Recommendations issued under the
PHEIC, any country infected by poliovirus should declare the outbreak as a national public health emergency and consider vaccination of all international travellers.

**Comment**

Wild polio virus type 1 (WPV1) was imported twice into Angola from Uttar Pradesh, India (a major reservoir of endemicity for WPV1 and WPV3 until 2010-2011), once in 2004/2005 and once in 2006. WPV1 from the first importation spread to the DRC in 2006, sparking a series of outbreaks that continued well into 2011. WPV1 from the second importation was widely disseminated in the DRC and spread to the Republic of the Congo in 2010-2011. VP1 sequence relationships revealed frequent transmission of WPV1 across the borders of Angola, the DRC, and the Republic of the Congo. Long branches on the phylogenetic tree signaled prolonged gaps in AFP surveillance and a likely underreporting of polio cases [1].

A study by Membo et al. found that surveillance of AFP in the DRC was below target with “isolation rates consistently below the minimum requirement of ≥10% and the proportion of stool specimens that reached the laboratory within 72 hours of being sent were always below 15% (WHO target is ≥80%)”. Virus isolation and differentiation showed that 1.5% of AFP cases were infected by WPVs, 5.5% by Sabin strains, 0.5% by VDPVs and 7.2% by non-polio enterovirus [2].


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