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## Monitoring of human enteroviruses in the Slovak Republic: Before and after the change of polio vaccination strategy

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We present the monitoring program of sewage water according to the World Health Organization (WHO) strategy for polio eradication in the Slovak Republic (SR). Polioviruses (PV) and non-polio enteroviruses (NPEV). We cover the period from 2001 to 2016, which ranges from before and after the change in polio vaccination strategy, in the Slovak Republic. Samples from the sewage treatment plants of 48 localities from Western, Central and Eastern regions were tested. We have compared the circulation pattern of PVs and NPEVs in the SR, as a component of the PV surveillance program. WHO standard procedures were followed for virus isolations and identifications. 870 human enteroviruses (EVs) were detected: 357 (41%) *Coxsackie B viruses* (CBV), 309 (36%) *Echoviruses*, 76 (9%) NPEV not-typed and 114 (13%) Sabin-like PVs (PV1, 2, 3) including vaccine-derived Poliovirus (VDPV) isolates. The percentage of PV isolates fell from 66% to 30% during 2001–2005 and thereafter to zero. CBV5, *Echoviruses* 3 and 11 were the NPEVs endemic during the study period. In conclusion, we have shown that the changes in the vaccination program of oral polio vaccine towards inactivated polio vaccine in the year 2005 changed the balance of circulating serotypes from Sabin-like PV and vaccine derived PV towards the NPEV. In September 2015, wild PV type 2 was officially declared eradicated. According to the WHO Global Action Plan to minimize poliovirus facility-associated risk after type-specific eradication of wild polioviruses, Slovak republic disposed all material containing PV2.

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### Biography

Renata Kissova is a Virologist. Currently, she is the Heads of Virology Laboratory of the Regional Authority of Public Health in Banska Bystrica, Slovak Republic. Her work is focused mainly on the surveillance and diagnosis of *Enteroviruses* and influenza viruses, especially virus isolations in cell cultures techniques. She has received her MSc Microbiology degree from the Safarik University in Kosice and the Slovak Medical University in Bratislava, Slovakia. She got her PhD at the Faculty of Public Health of Slovak medical University in Bratislava, Slovakia. Since 2013, she has been teaching at the Slovak Medical University, Faculty of Health in Banska Bystrica.

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