Review of: "Consequences of Neglecting Epidemiology by Global Polio Eradication Initiative"

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Potential competing interests: No potential competing interests to declare.

In the article „Consequences of neglecting epidemiology by Global Polio Eradication Initiative" , the authors presented several points of view regarding the role of epidemiology in decisions regarding the polio vaccination policies in low income countries in Africa and Asia.

From the beginning must be clarified who is GPEI, a public-private partnership led by national governments with six partners – the World Health Organization (WHO), Rotary International, the US Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF), Bill & Melinda Gates Foundation and Gavi, the vaccine alliance. The goal of the Global Polio Eradication Initiative is to eradicate polio worldwide, improving surveillance, immunisation activities and ensure a rapid and effective response to any polio virus emergence.

Regarding the statement "GPEI chose to use trivalent oral polio vaccine (tOPV) exclusively (ignoring its very low VE in low income countries of Africa and Asia), instead of inactivated poliovirus vaccine (IPV) " the history of polio vaccination in Afganistan could be relevant in the support assured by the GPEI in collaboration with the National Public Health Authorities. The program of vaccination in Afganistan was decided after a careful assessment and thorough risk- benefit analysis led by the Government of Afghanistan and supported by the Global Polio Eradication Initiative (GPEI). UNICEF is a key player in the GPEI is working with the Ministry of Public Health (MoPH) through the Emergency Operating Center (EOC), the World Health Organization (WHO) and non-governmental organisations in finding innovative ways to reach every child with vaccines.

Concerning the statement "GPEI ignored the safety problems of OPV" , the authors must presented clear the advantages of OPV that have become the main instrument for the wild-type PV eradication program because it induces both a systemic and mucosal immune response. The advantage of using IPV is that it poses no risk of vaccine-related disease. The disadvantages for the global introduction of IPV are its cost, the intramuscular administration, its inability to produce optimal intestinal immunity and the biocontainment required for its production. The major risks to stopping endemic WPV-1 transmission and cVDPV2 outbreaks in Afghanistan are prolonging inaccessibility in the traditional polio reservoirs; influenced by the broader geo-political situation, WPV-1 and cVDPV2 co-infection (following cVDPV2 importation from Pakistan) and the ongoing COVID-19 pandemic.

For understanding the role of epidemiology in the design of intervention tactics, the authors could presented the short history of polio vaccination. About the statement "Vaccine-safety problem remained hidden as incidence of VAPP was not monitored" it is not clear where the VAPP cases were not monitored (in low income countries?). Could the authors mentioned the study that led to this conclusion ?

In the statement "In USA IPV was introduced in 1955 followed by IPV and tOPV till 1964, and tOPV exclusively

thereafter”, it is a mistake because now in the United States as part of routine childhood immunization, children should get inactivated polio vaccine (IPV) (at 2 months old, 4 months old, 6 through 18 months old, 4 through 6 years old).

The authors must mention the studies that are the basis of the conclusion “ Without defining the force of infection or identifying transmission vectors and route of inoculation, GPEI proceeded with inexplicable hubris bringing the world to the imbroglio that has virtually replaced WPV with vaccine-derived wild-like polioviruses”.

The article should be revised and evidence-based information related to the role of epidemiological studies in decisions regarding the polio vaccination policies in different countries at risk, should be introduced.