

Learning across Borders: Advocacy of Pediatricians in Public Health Response during a Recent Wild Poliovirus Transmission in Israel

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Israel has been certified as polio-free by the World Health Organization, and since 2005, its routine immunization schedule consists of inactivated poliovirus vaccine (IPV) only. At the end of May 2013, the Israeli Ministry of Health has confirmed the reintroduction of wild-type poliovirus 1 into the country. Documented ongoing human-to-human transmission necessitated a thorough risk assessment followed by a supplemental immunization activity (SIA) campaign using bivalent oral polio vaccine (bOPV). The unusual situation in which ongoing poliovirus transmission was picked up through an early warning system of sewage monitoring without active polio cases, brought about significant challenges in risk communication.^{1,2}

Challenges

The communication of the need for a SIA to the public faced several challenges.² The remote chance of vaccine-associated paralytic poliomyelitis (VAPP) because of the reintroduction of oral polio vaccine (OPV) into an IPV-only country caused antivaccination movements to strongly oppose the SIA. There was a critical need to face them and respond to their arguments both in the traditional media (newspapers, television) and in the new media (internet, social networks). These movements also appealed to the Supreme Court against the vaccination campaign but eventually were turned down.

The re-introduction of OPV was challenging for several reasons, especially because there were no clinical cases of poliomyelitis, and, therefore, arguments such as why to bother when “viruses are only in sewage” were common. These challenges posed a major risk of a Halo effect on the routine vaccination program: objection and mistrust related to bOPV campaign could have spread to other vaccines.

Adverse Effects

The possibilities of VAPP and future circulation of vaccine-derived polioviruses strains were heavily considered. It was also expected that a mass vaccination campaign would be

accompanied by serious temporal side effects and allegations that these events were related to the administration of bOPV. In addition, introducing bOPV during an era of growing populations of immune-compromised children and adults brought up questions regarding the attendance of these children at daycare and school when their school-mates have been vaccinated with bOPV.

Stigmatization of the OPV

Since the vaccine was taken out of routine vaccination in 2005, descriptions such as “the dangerous vaccine” were quite common in the press and electronic media. bOPV was attacked by vaccine opponents as a “new” and “investigational” product, which was not tested properly by clinical trials. Parents were exposed to information and misinformation regarding the dangers of OPV from multiple media sources.

Protecting the Community

Candidates for OPV were basically protected. The target population for bOPV vaccination was children who were already immunized with IPV to prevent the circulation of wild poliovirus (WPV). bOPV was not administered to children who had not been vaccinated previously with IPV to prevent cases of VAPP. This strategy created an unprecedented situation. The vaccine was prescribed to children who were already protected from paralytic polio to protect other portions of the society.

Role of the Israel Pediatric Association

The Israel Pediatric association collaborated with the Ministry of Health during and following the vaccination campaign.

Reaching a Consensus among Pediatricians

The main motive was that when the parents are flooded with information regarding OPV vaccination they may seek the advice of their pediatricians to decide whether to vaccinate

bOPV	Bivalent oral polio vaccine
GBS	Guillain Barre syndrome
IPV	Inactivated poliovirus vaccine
OPV	Oral polio vaccine
SIA	Supplemental immunization activity
VAPP	Vaccine-associated paralytic poliomyelitis
WPV	Wild poliovirus

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their children. The leadership of the association was consulted through all stages of the campaign. Detailed scientific and guidance material was periodically e-mailed to all Israeli pediatricians and posted in the association's website.³ In addition, the leaders of the association took part in regional conferences with local pediatricians and family physicians. An interactive discussion between pediatricians and key opinion leaders took place in the Israel Pediatric Research in Office Setting Network mailing list. Throughout the campaign, questions sent by pediatricians relating to specific vaccination scenarios were answered at the same day by the leadership of the association.⁴

Community Outreach

Leaders of the organization visited the main areas of WPV circulation to personally and openly discuss with the local communities the importance of OPV vaccination. The Israeli Pediatric Association prepared printed material that was delivered in public areas and the local press that included explanations regarding the reason for vaccination with OPV. This material was published both in Hebrew and Arabic.

Television and Social Networks

The leaders of the Association took an active role in the media campaign for the SIA. They were frequently interviewed and also participated in television debates with vaccination opponents.⁵ Members of the association were active in social networks to identify and face misinformation regarding the vaccination campaign.

A Response to Crisis

During the SIA, 4 vaccinated children were diagnosed with neurologic manifestations that were claimed by vaccine opponents to be attributed by to the OPV. There were 3 cases of Guillain Barre syndrome (GBS) and 1 case of acute disseminated encephalomyelitis. These cases were broadly covered by the press and electronic media. Some of the parents were interviewed and accused that OPV administration was the reason of their children's problem. A special expert panel was nominated by leadership of the association to examine the possible association of these neurologic manifestations with the vaccination. The final report of this committee concluded that there was no association between the vaccine and the neurologic manifestations⁶ based on the following: (1) rate of GBS among vaccinees was not higher than the rate in the general population; (2) total number of cases of GBS in 2013 (the year of the vaccination) was actually lower than in previous years; and (3) other causes for GBS—like *Campylobacter* Jejuni infection—were finally isolated in most of the cases. The report of this panel was sent to all pediatricians and received a broad coverage by the national press and assisted in discontinuation of these accusations.

Lessons

This unprecedented public health event highlights the possibility of a reintroduction and transmission of wild polio in a

highly vaccinated IPV country. There was no earlier reference to learn from and it was like “inventing the wheel.” The environmental surveillance proved crucial both for early detection and for monitoring the intervention. The successful concerted national public health response was achieved by reaching a consensus among health care professionals, consultation with external experts, and proactive risk communication to the public in all forms of media (including internet and social networks) and to community leaders finally reached a high national vaccination rate with bOPV of 79% among the target population.

Implications for Europe

In addition to the detection of poliovirus in Israel, an outbreak of paralytic poliomyelitis was reported in Syria in October 2013, where vaccination coverage has dramatically decreased during the civil war. In addition, a paralytic case of polio was identified in Iraq.⁷ These events increase the threat of reintroduction of WPV into the European Union and European Economic Area.⁸ European Center for Disease Prevention and Control recently has issued recommendations for European Union member states to take several steps to face polio threat including considerations regarding the possible usage of OPV upon introduction of WPV to European country.⁹

We believe that when an OPV campaign is considered in an IPV-based country in response to WPV detection, the Israeli experience with the recent mass OPV campaign may assist the decision makers and the professional societies in successful handling of such a public health crisis, especially when approaching the polio “end-game.” ■

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