

Current Health Event

Bivalent OPV Vaccine (bOPV) in Lebanon

Ministry of Public Health (MoPH), Lebanon endorsed use of bivalent oral poliomyelitis vaccine in Lebanon; WHO and UNICEF were notified.

Editorial note:

There are three types of wild poliovirus (WPV) - type 1 (WPV1), type 2 (WPV2) and type 3 (WPV3) - each of which is targeted by a different component of the trivalent oral polio vaccine (tOPV). Although wild poliovirus type 2 appears to have been eradicated globally in 1999, vaccine related type 2 viruses continue to cause the majority of circulating vaccine-derived poliovirus (cVDPV) outbreaks and many vaccine associated paralytic poliomyelitis (VAPP) cases. Therefore, OPV type 2 now carries more risk than benefit and undermines global polio eradication efforts. Thus, tOPV will be replaced with bivalent OPV (bOPV), which will continue to target the remaining polio types (WPV1 and WPV3). Once these types are eradicated, bOPV will also be withdrawn.

The World Health Organization (WHO) Strategic Advisory Group of Experts on immunization (SAGE) has called for a global withdrawal of type 2-containing OPV during 2016. This sets the stage for ending bOPV use entirely in 2019-2020. OPV type 2 withdrawal would be achieved by switching from tOPV to bOPV (containing only types 1 and 3 vaccine poliovirus) in routine immunization programs.

The withdrawal of OPV type 2 would leave a gap in population immunity against type 2 poliovirus. The

bOPV Regulatory Implications: 12th Consultation with OPV&IPV manufacturers and NRAs, Geneva – 10 October 2013

- In July 2013, WHO invited key National Regulatory Authorities (NRAs) in Geneva to define regulatory pathway and requirements for the label change of bOPV
- bOPV should be used for supplementary immunization activities or for outbreak controls
- In routine, tOPV remains the vaccine recommended by WHO
- For the switch, planned in 2016, label change is required to allow the routine use of bOPV regulatory pathway & requirements
- Agreed that non inferiority study demonstrating the seroprotection of bOPV in the routine schedule is sufficient for label change

new bivalent oral polio vaccine for routine immunization backed up by judicious use of inactivated polio vaccine (IPV). Thus, immediately following global withdrawal of OPV type 2, countries that have not introduced IPV would be at an increased risk of outbreaks in the case of reintroduction of a type 2 virus. A reintroduction or emergence of cVDPV type 2 could potentially result in a substantial polio out-

break or even re-establishment of global transmission. Such an outbreak could be rapidly interrupted through mOPV type 2.

The use of bivalent oral polio vaccine and IPV will succeed in eliminating the main risk due to the type 2 virus. After the eradication of all remaining strains of wild poliovirus transmission, countries could stop using the bivalent oral polio vaccine, eliminating any residual remaining risks associated with the type 1 and 3 components contained in that vaccine.

Facts about bOPV:

- First used in Afghanistan in 2009.
- At least 30% more effective than the old tOPV against polioviruses types 1 and 3
- Does not contain live type 2 poliovirus that caused 80% of cases of vaccine-derived polioviruses since the first outbreak in Hispaniola.
- Bivalent vaccines protect against two serotypes of a disease, trivalent vaccines against three.

Cumulative Notifiable diseases in Lebanon (Syrian)

Disease	2013 Cumul	2014 Cumul*	Mar	Apr
Vaccine Preventable Diseases				
Polio	0(0)	0(0)	0(0)	0(0)
Acute Flaccid Paralysis	34(7)	12(5)	4(3)	3(0)
Measles	1760(232)	121(46)	41(13)	17(7)
Mumps	14(2)	20(12)	10(6)	2(1)
Pertussis	59(9)	23(6)	4(0)	0(0)
Rabies	1(1)	0(0)	0(0)	0(0)
Rubella	27(1)	0(0)	0(0)	0(0)
Tetanus	4(0)	0(0)	0(0)	0(0)
Viral Hep B	141(8)	53(5)	8(1)	13(2)
Water/Food Borne Diseases				
Brucellosis	189(12)	31(1)	8(0)	5(0)
Hydatid cyst	13(3)	4(0)	0(0)	0(0)
Typhoid Fever	407(21)	50(3)	12(0)	4(3)
Viral Hep A	1551(220)	481(72)	157(14)	30(3)
Other Diseases				
Leishmaniasis	1033(1032)	224(223)	51(51)	0(0)
Meningitis	204(24)	55(5)	11(1)	12(1)
Viral Hep C	103(4)	27(1)	5(1)	4(0)

Source: Ministry of Public Health, Lebanon . Cumul= Cumulative