

Current Health Event

Eradication of Poliovirus Type 3

In a remarkable announcement on October 24th, 2019 which marks the World Polio Day, the Global Polio Eradication Initiative (GPEI), a partnership led by the World Health Organization (WHO), Rotary International, CDC, UNICEF and the Bill & Melinda Gates Foundation declared the global eradication of wild poliovirus type 3 (WPV3).

Editorial note:

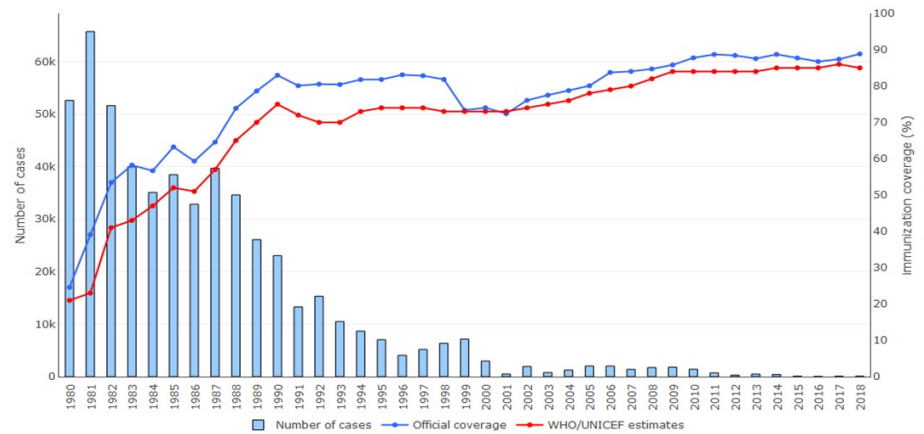
The eradication of WPV3 follows the certification of the global eradication of WPV2, leaving only WPV1 actively circulating in Afghanistan and Pakistan. With an estimated 350 000 polio cases in more than 125 endemic countries in 1988, polio cases have decreased by over 99%. In 2018, 33 polio cases were reported in 2 endemic countries, namely Afghanistan and Pakistan. Wild poliovirus type 1 caused 100% of 2018 cases reported globally.

Of the three strains of wild poliovirus (WPV), WPV2 was last reported in 1999 and declared eradicated in 2015, WPV3 was last reported in November 2012 in Nigeria, and declared eradicated in 2019, and WPV1 has seen overall reduction in cases since 2013 whereby no WPV was detected anywhere outside the 3 endemic countries since 2014, and no WPV1 was detected in Nigeria since 2016.

Despite the progress achieved since 1988 towards polio eradication, all children worldwide are at risk of contracting the disease as long as a single child remains infected with poliovirus. The poliovirus is easily imported into a polio-free country and can rapidly spread amongst populations with sub-optimal immunization coverage. Failure to eradicate polio is a threat to the re-emergence of this paralyzing disease.

In Lebanon, the last autochthonous poliomyelitis were 2 cases reported in 1994. In 2003, a virus importation from India was reported with a paralytic case, and was successfully contained within 6 months. Lebanon is declared polio-free in 2002. This status, despite the 2003 importation, is maintained through extensive strength and reach of the national acute flaccid paralysis (AFP) surveil-

Figure 1: Poliomyelitis annual global reported cases and Pol3 coverage 1980-2018 (WHO, 2019)



lance system at the epidemiological surveillance unit (ESU) at the ministry of public health (MoPH), coupled with the nationwide efforts of the expanded programme on immunization (EPI).

2018 marked the 20th anniversary of the AFP surveillance system in the National Program for Poliovirus Eradication. Remarkably over the past 5 years and with the support of the World Health Organization (WHO) the program has witnessed consistent progress indicated by many successes, covering the enhancement of national surveillance systems, continuous capacity-building of national teams, the creation of a well-established reporting site network, the solidification of the relationship between reporting sites and surveillance departments, and the establishment of community-based surveillance.

Environmental surveillance was also launched in 2016 to act as an early warning system for polio and expanding its monthly surveillance to detect Wild Polio Virus, Vaccine Derived Polio Virus (VDPV), and Sabin viruses to four areas considered at high risk for polio.

In parallel, the EPI program worked tirelessly to maintain a high polio vaccination coverage through dedicated action plans designed specifically for high-risk subnational areas such as establishing vaccination sites at points of entry and UNHCR registration sites, and setting forth a number of OPV supplementary immunization activities.

Polio Post Eradication Certification Strategy:

Detect and respond Promptly detect any poliovirus in a human or on the environment and rapidly respond to prevent transmission

Protect populations Withdraw the OPV from use and immunize populations with IPV

Contain polioviruses Ensure potential sources of poliovirus are properly contained or removed

Notifiable Diseases in Lebanon (Cumulative n° of cases among all Residents (among Syrians) as of 17 November 2019)				
Disease	2018	2019	Sep	Oct
Vaccine Preventable Diseases				
Polio	0(0)	0(0)	0(0)	0(0)
AFP	88(33)	72(15)	4(0)	5(2)
Measles	952(156)	1061(102)	11(4)	8(1)
Mumps	121(41)	113(27)	19(4)	10(1)
Pertussis	64(26)	71(21)	6(2)	8(0)
Rabies	3(1)	0(0)	0(0)	0(0)
Rubella	11(4)	21(7)	0(0)	0(0)
Tetanus	2(1)	0(0)	0(0)	0(0)
Viral Hep. B	253(28)	266(34)	25(2)	15(1)
Other Notifiable Diseases				
Brucellosis	242(26)	213(32)	40(14)	11(1)
Cholera	0(0)	0(0)	0(0)	0(0)
Hydatid cyst	8(2)	28(2)	1(0)	2(0)
Typhoid fever	237(4)	232(4)	22(1)	22(0)
Viral Hep. A	899(152)	399(107)	51(6)	26(1)
Other Notifiable Diseases				
Meningitis	420(82)	430(74)	56(7)	34(2)
Viral Hep. C	103(7)	73(5)	7(0)	8(0)