

Situation Report 1

Polio Outbreak

# of samples confirmed	VDPV1	cVDPV2
Environmental	4	2
Human	0	1

19 September 2019

Highlights

- Between 1 July and 27 August 2019, 4 environmental samples tested positive for Vaccine Derived Poliovirus Type 1 (VDPV1) from Tondo (Manila). No genetic linkage was found with any other known VDPV1, indicating new emergence.
- Between 13 and 22 August 2019, 2 environmental samples tested positive for VDPV Type 2 (VDPV2) from Tondo and Davao. Both samples were found to be genetically linked.
- All samples collected through environmental surveillance by the Research Institute for Tropical Medicine (RITM) and laboratory confirmed by the Global Specialized Laboratory (GSL) for enteroviruses at the National Institute of Infectious Diseases (NIID) in Japan
- On 14 September 2019, VDPV2 was confirmed in one three-year-old child with Acute Flaccid Paralysis (AFP) symptoms, from Lanao del Sur (Mindanao). The isolated VDPV2 was found to be genetically linked to the 2 confirmed VDPV2 environmental samples. As a result, VDPV2 was classified as circulating (cVDPV2)
- **On 19 September 2019, the Department of Health (DOH) confirmed the re-emergence of polio in the Philippines and declared a national polio outbreak, in line with International Health Regulations (IHR)**
- Synchronized polio vaccination conducted in Manila in response to the 1st confirmed VDPV1 samples only reached 53.8% of the target number of children aged 0 to 59 months.
- Estimated polio vaccination coverage for children aged < 1 year with the required 3 doses of bivalent oral polio vaccine (bOPV) in the Philippines for 2018 was 66% (compared to the recommended 95%), and for inactivated poliovirus vaccine (IPV) coverage has been below 50% since its introduction in 2016, and is currently at 23% for 2019.

Current Situation

VDPV1 Four (4) environmental samples collected through routine and enhanced environmental surveillance conducted by the Philippines Research Institute for Tropical Medicine (RITM) from a sewage pumping station in Manila on 1 and 22 July, 13 and 27 August 2019 tested positive for VDPV1 by the NIID. The NIID and the United States Centres for Disease Control (US CDC) compared the viruses and did not find a genetic linkage with any other known VDPV1, indicating new emergence.

VDPV2 Two (2) environmental samples and stool samples from one AFP case tested positive for VDPV2: one environmental sample collected from Manila on 13 August 2019, and one from Davao City on 22 August 2019; the stool samples from the AFP case in Lanao del Sur were collected on 5 and 6 July 2019. The onset of paralysis was on 26 June 2019. The NIID confirmed a genetic linkage between all VDPV2 isolates. Comparison done at NIID and US CDC in poliovirus databases showed no genetic linkage with any other known type 2 poliovirus, indicating new emergence.

A polio outbreak was declared after the confirmation of VDPV2 being circulating based on the demonstrated person-to-person transmission in the community, through both human and environmental detections.

VDPVs are rare strains of poliovirus that have genetically mutated from the strain contained in oral polio vaccines (OPV). VDPVs occur on rare occasions in areas with inadequate sanitation: in seriously under-immunized populations an excreted vaccine virus can mutate and cause paralysis. VDPVs, therefore, pose a risk of reintroduction of poliovirus after polio eradication.

Response

Risk assessment

Overall risk		
National	Regional	Global
High	Moderate	Low

For the past years the Western Pacific Regional Commission for Certification of Poliomyelitis Eradication (RCC) assessed the Philippines as high-risk for poliovirus transmission in case of importation or emergence and circulation of VDPV, mainly because of:

- chronically suboptimal immunisation coverage with polio vaccines,
- sub-optimal performance of AFP surveillance, and,
- poor sanitation and hygiene conditions.

The regional risk of potential spread across international borders is assessed to be moderate considering the large number of Overseas Filipino Workers (OFW). At global level, the risk is low.

Since 2014, the international spread of poliovirus has been categorized as a Public Health Emergency of International Concern (PHEIC) by the IHR Emergency Committee. Besides for VDPV, there are also several Wild Polio Virus outbreaks (WPV) occurring worldwide.

Table 1: Countries throughout the world affected by polio outbreaks (per type)

WPV1, cVDPV1 or cVDPV3	cVDPV2	Vulnerable to re-infection by WPV or cVDPV
Afghanistan (WPV1)	Democratic Republic of the Congo	Cameroon
Nigeria (WPV1)	Nigeria	Chad
Pakistan (WPV1)	Somalia	Central African Republic
Somalia (cVDPV3)	Niger	Kenya
Papua New Guinea (cVDPV1)	Mozambique	Syrian Arab Republic
Indonesia (cVDPV1)		

Surveillance and laboratory testing

Detection of polio cases is done through testing of environmental samples from wastewater, sewage, or waterways (rivers and creeks), or testing of stool samples from suspected Acute Flaccid Paralysis (AFP) cases.

RITM started environmental surveillance in April 2017 and is now testing samples from 11 sites on a monthly basis. Environmental sampling was stepped up after the confirmation of the first VDPV1 cases, facilitating the detection of additional isolates positive for VDPVs.

AFP surveillance is done through weekly reporting as part of the Philippine Integrated Disease Surveillance and Response (PIDSRS) system, with 60 to 70% of AFP cases having adequate sample collection.

Despite efforts to improve AFP surveillance, performance is below the target in 8 of 17 regions.

In response to the positive environmental samples, WHO conducted training on AFP surveillance for health workers and Regional Epidemiological Surveillance Units (RESUs) in all 17 regions.

Between 1 August and 14 September, DOH Metro Manila health workers visited 28,548 households in 108 barangays: none of the 33,365 children under the age of 15 that were seen, had any signs of AFP.

Enhanced surveillance of 24 hospitals in NCR found 60 AFP cases reported between 1 January and 14 September 2019 (**Figure 1 and 2**).

Figure 1: Distribution of AFP Cases by Laboratory Status (N=60)
National Capital Region, 1 January-14 September 2019

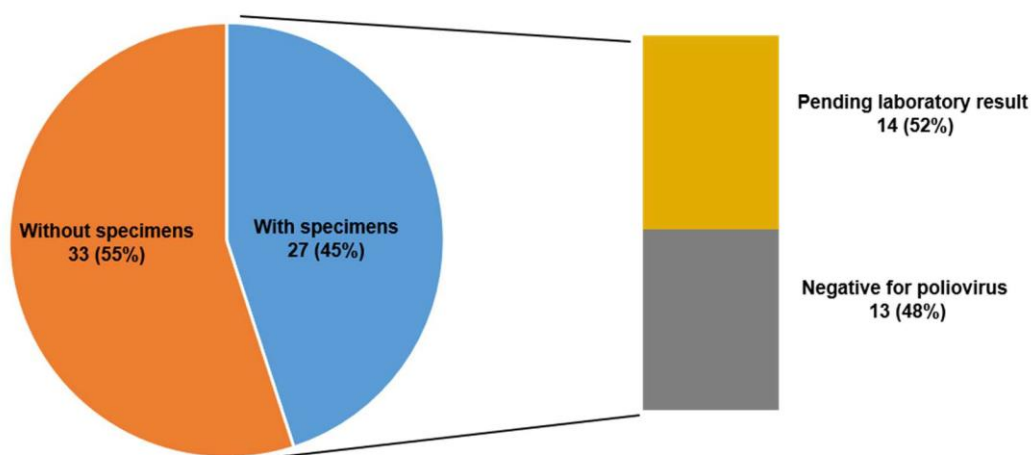
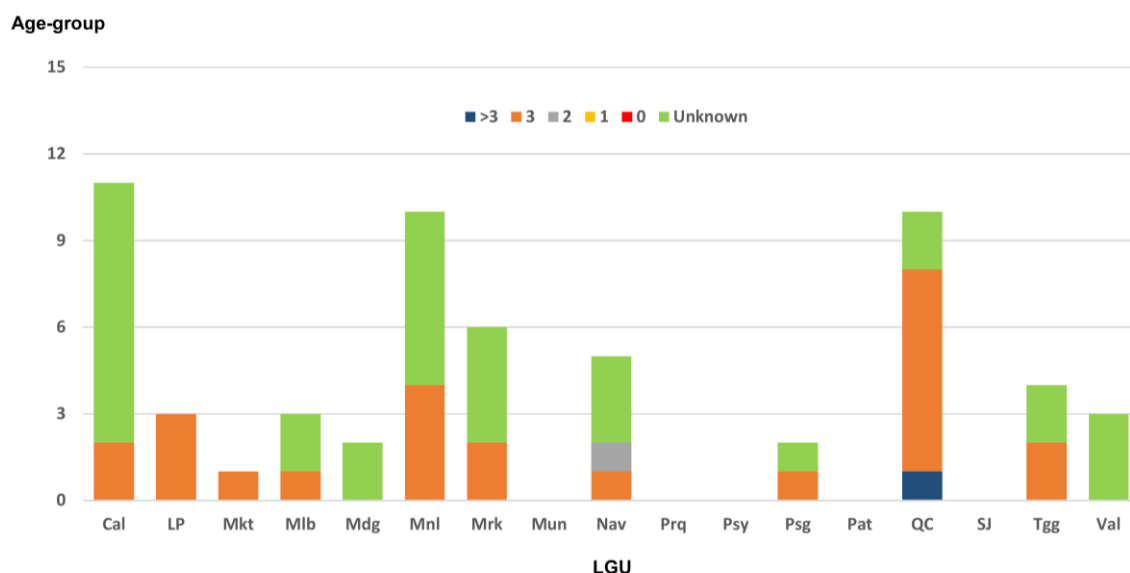


Figure 2: Distribution of AFP Cases by LGU and Immunization Status (N=60)
National Capital Region, 1 January-14 September 2019



Case management

There is no cure for polio. It can only be prevented through the polio vaccine. To stop the spread of polio, at least 95% of people need to be vaccinated.

Polio is a highly infectious disease, and is transmitted mainly through the faecal-oral route,

The last known case of wild poliovirus recorded in the Philippines was in 1993. The country was declared wild polio-free in 2000.

Immunization

Vaccination coverage in the Philippines has been steadily declining over the past few years. Estimated polio vaccination coverage for children aged < 1 year with the required 3 doses of bOPV for 2018 was 66% (compared to the recommended 95%) (see map on the right).

For IPV, coverage has been below 50% since its introduction in 2016 and is at 23% for 2019.

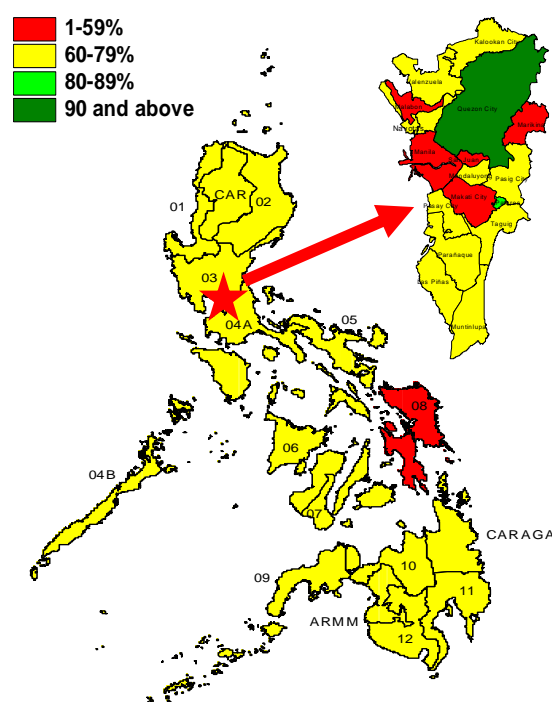
Table 2: Details of polio vaccines administered in the Philippines

Name	How	Polio	Doses	Weeks	Coverage
bOPV	Oral	1, 3	3	6, 10, 14	66%
IPV	Injectable	1, 2, 3	1	14	49%

As part of the Global Polio Eradication Initiative, the trivalent oral polio vaccine (tOPV) was withdrawn in April 2016 and replaced with bOPV removing the type 2 component (OPV2) from immunization programmes due to the continued emergence of type 2 VDPVs, despite eradication of WPV type 2 in 1999.

In response to the first confirmed VDPV1 samples, a synchronized vaccination campaign was organized on 19 to 31 August in Manila, reaching 53.8% of all targeted children 0-59 months with bOPV.

bOPV coverage 2018



Monitoring

Teams from the Department of Health, WHO and UNICEF visited 46 health centres (out of 59) and 84 barangays in Manila to monitor the vaccination campaign, as well as 69 barangays for Rapid Coverage Assessments.

Risk communication

The Secretary of Health made a public announcement on the detection of VDPV1 on 31 August 2019, followed by the Mayor of Manila on 2 September 2019. DOH, WHO and UNICEF stepped up promotional messages through TV, radio and social media on the importance of polio vaccination among the broader population.

On 19 September 2019, the Secretary of Health publicly declared a polio outbreak in the Philippines.

Next Steps

- Second round of synchronized polio vaccination is planned for October, while awaiting the technical recommendations from global polio advisory group including geographic scale and vaccine.
- Development and dissemination of appropriate risk communication messages
- Further case investigation & case finding: community search for AFP cases and close contact sampling
- Enhance AFP and environmental surveillance by review of charts in all hospitals and health centres and supporting community search and adding more environmental surveillance sites in Metro Manila
- UNICEF will support the government to procure and ensure the availability of the required vaccine supplies for the campaigns
- WHO and UNICEF supporting DOH with convening health cluster for coordination with health partners in outbreak response interventions.