



# ACUTE FLACCID PARALYSIS (AFP) SURVEILLANCE

Morbidity Week 28  
January 1—July 16, 2016

Epidemiology Bureau  
Public Health Surveillance Division

**Poliomyelitis** is one of the vaccine preventable disease targeted for eradication. It is a highly contagious disease which mainly affects children under 5 years of age. One of the essential strategy which aims to monitor poliovirus circulation is Acute Flaccid Paralysis (AFP) Surveillance. Its role is to identify high risk areas, monitor progress, maintain polio-free certification and utilize data to choose supplementary strategies. The quality of AFP surveillance is measured by using a standard definition for sensitivity and completeness.

A total of 161 AFP cases were reported from January 1-July 16, 2016. Of these, 142 (88%) were already classified as non-polio AFP while 19 (12%) of the cases are still pending for classification. This provides the Philippines an annualized non-polio AFP rate of 0.72 per 100,000 children below 15 years old which is below the minimum required target of 1/100,000 population of <15 y/o.

Since the country was identified a high risk for poliovirus importation in 2002, the indicator of surveillance sensitivity was increased to two cases of non-polio acute flaccid paralysis (AFP) that should be detected annually per 100 000 population aged less than 15 years. Failure to reach the target requirement means that the system is probably missing AFP cases. Out of the 17 regions, only 4 regions were able to surpass the minimum target at present.

All AFP cases should have a full clinical and virological investigation with at least 80% of AFP cases having adequate stool specimens collected. From 2014-2016, the country failed to reach the 80% benchmark. Only 29% (5 out of 17 regions) reached the target at present.

NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.

Figure 1. Non-polio AFP rate (per 100,000 persons < 15 years of age), 2014-2016\*

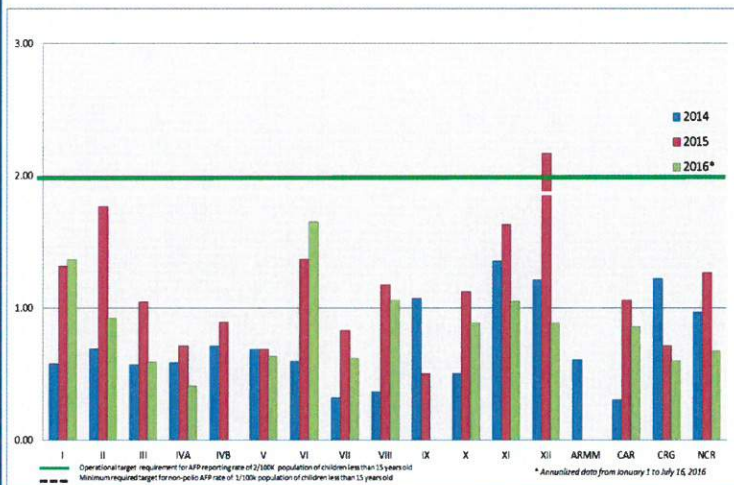


Figure2. Adequate specimen collection rate, 2014-2016\*

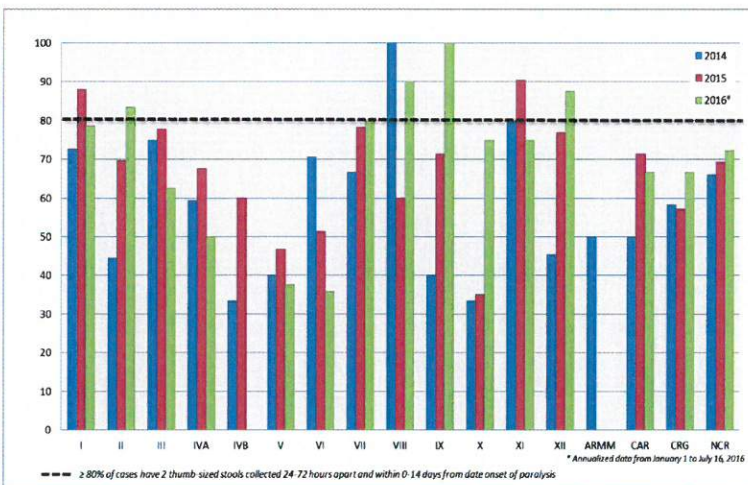


Figure 3. Percent distribution of AFP cases according to timeliness of report by region, 2016\*

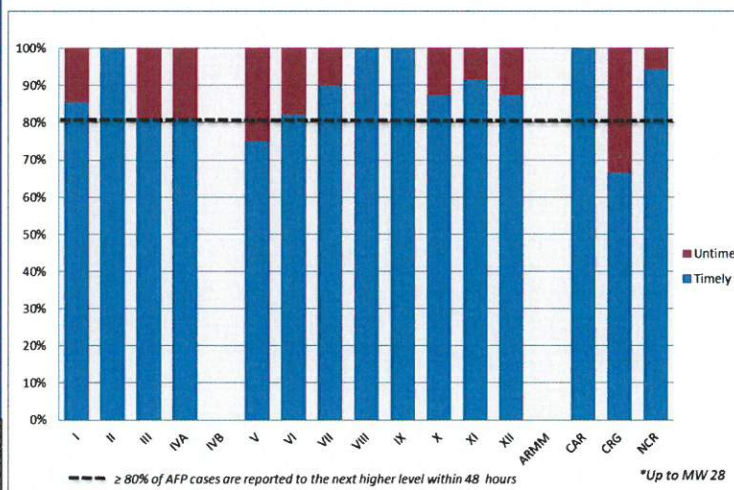
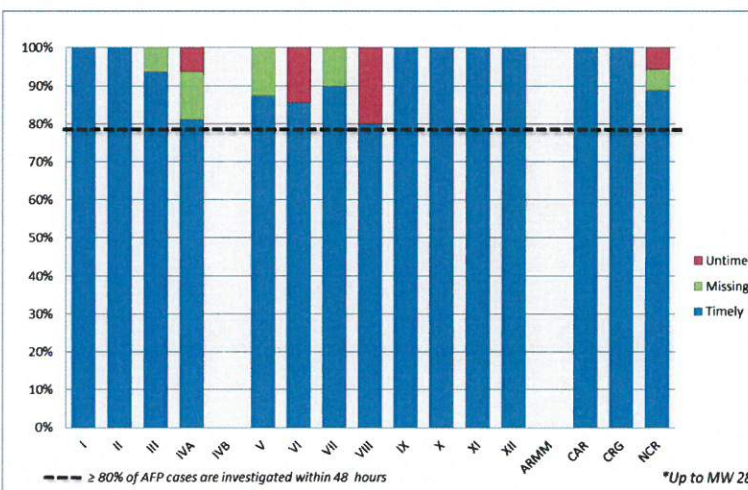


Figure 4. Percent distribution of AFP cases according to timeliness of investigation by region, 2016\*







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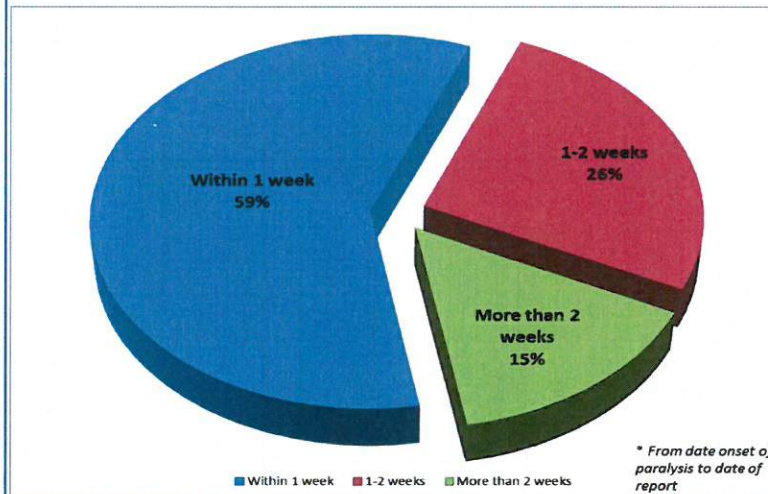
At least 80% of expected routine (weekly or monthly) AFP surveillance reports should be received on time, including zero reports where no AFP cases are seen.

All AFP detected are expected to be reported to the next higher level within 24-48 hours for timely collection of stools specimen and investigation. From 2015-2016, there are still cases that are being reported for more than 2 weeks. 81% of the AFP cases were timely reported and 91% were timely investigated.

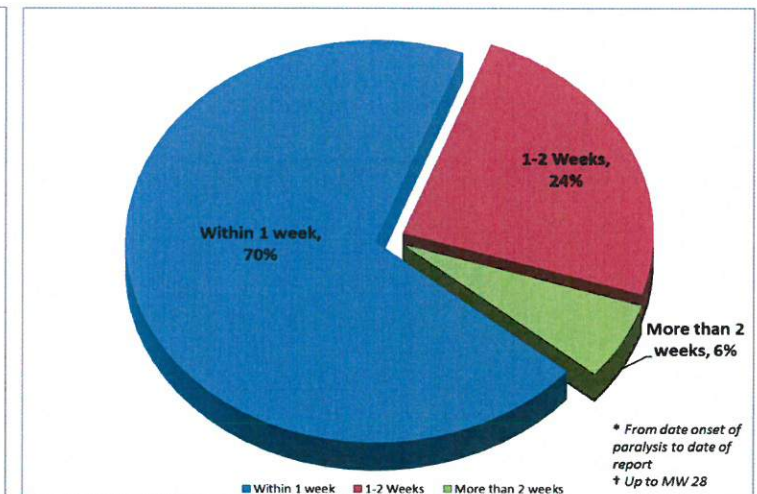
Information on the OPV doses of reported cases are also monitored to inform EPI coordinators and use this data to assist them in choosing supplementary strategies. At present, only 66% of the AFP cases ages 5 years and below had completed their OPV dose and 58% of children ages 6 and above had completed the dose. There were only 4 Regions with AFP cases that completed the 3 OPV doses, while the majority are either with incomplete or unknown OPV dose.

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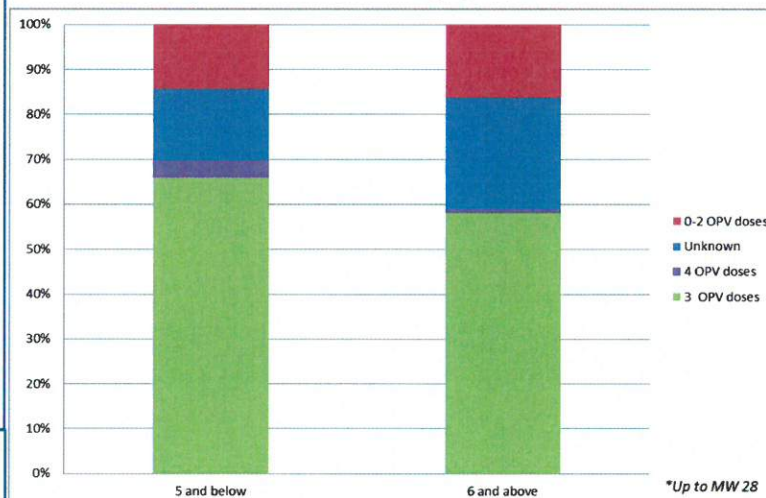
**Figure 5. Percent Distribution of AFP Cases by Time of Detection\***  
 2015 (N=413)



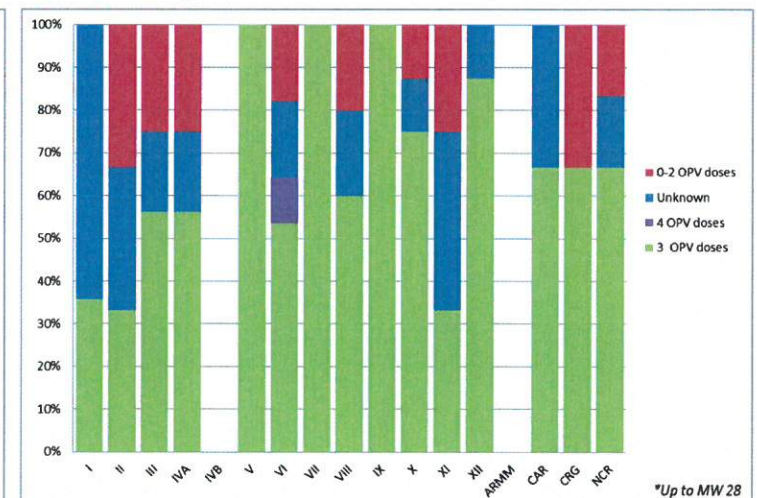
**Figure 6 Percent Distribution of AFP Cases by Time of Detection\***  
 2016† (N=161)



**Figure 7. Percentage of reported AFP cases by number of polio vaccination doses and age group, 2016**



**Figure 8. Percentage of reported AFP cases by number of polio vaccination doses and region, 2016**







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The first links in the surveillance chain are the staff in all health facilities; from district health centers to large hospitals. In addition, public health staff make regular visits to hospitals to search for AFP cases which may have been overlooked or misdiagnosed (*The Global Polio Eradication Initiative, 2010*).

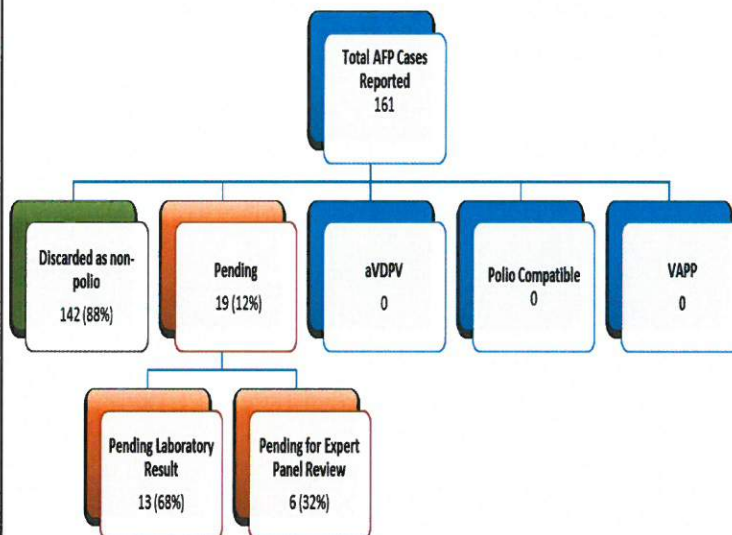
In the Philippines, 79% of the AFP cases that were detected from January 1-July 16 came from the government hospitals, while only 13% were detected from private hospitals. There were only a few cases that were detected at the RHU, MHO and CHO level.

The country also follows the WHO classification scheme for AFP cases. As of morbidity week 28, 88 % of the cases has been classified as non-polio; with only 12% left which are pending for classification. No VDPV has been detected since January. The last case of aVDPV was in December 2014 found in T'boli, South Cotabato, Region XII. No other VDPV was found in the community since then.

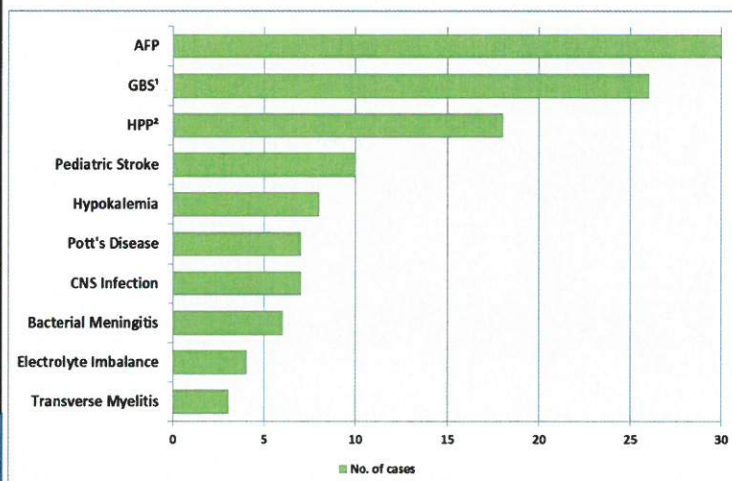
The differential diagnosis of AFP includes but is not limited to, poliomyelitis, GBS<sup>1</sup>, traumatic neuritis and transverse myelitis. These four are the common diseases that represent the most common causes of AFP; however, there are other differential diagnosis that have numerous etiologies. Hence, any diseases that presents as AFP, even if diagnosed as disease other than polio by the physician should be reported, collected with specimen and investigated.

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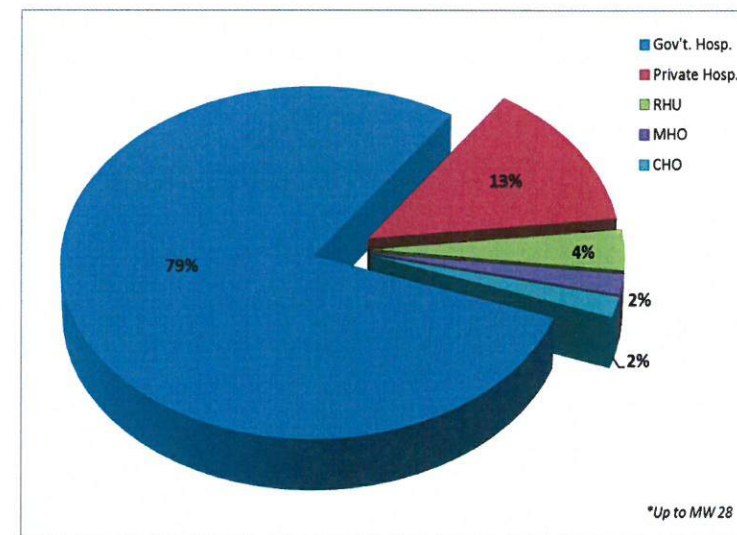
**Figure 9 Total AFP Cases by Classification, as of MW 28**



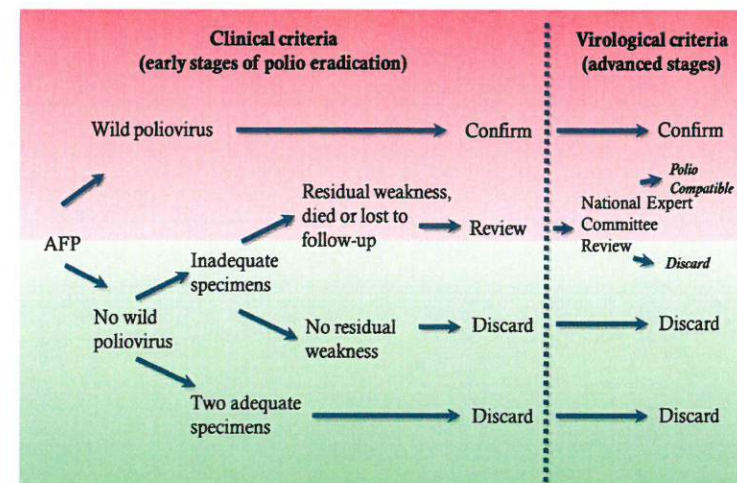
**Figure 11. Ten most reported AFP Cases by Differential Diagnosis,**



**Figure 10. Types of Disease Reporting Units (DRUs), 2016\***



**Figure 12. WHO Classification Scheme for AFP**







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Table 1. Classification of AFP cases and key surveillance indicators

January 1 - July 16, 2016												
REGION	Expected AFP Rate 2016 2/100k	Expected AFP Rate 2016 1/100k	Reported Cases	Classification			Total Number of Classified Cases	Performance Indicators (Non-Polio AFP Cases)				
				Non-Polio (Discarded)	NOT AFP	Pending		Annualized Reporting Rate	Annualized Non-Polio AFP Rate	Adequacy of Stool Specimen	Timeliness of Reporting	Timeliness of Investigation
								AFP cases reported in a specified period	Discarded as non-polio AFP cases in a specified period	≥80 % of AFP cases with adequate stool specimen collected	≥80 % of AFP cases reported within 14 days of onset	≥80 % AFP cases investigated within 2 days of report
Region I	39	19	16	13	2	1	15	1.68	1.37	79	86	100
Region II	27	13	6	6	0	0	6	0.92	0.92	83	100	100
Region III	88	44	19	13	3	3	16	0.86	0.59	63	81	94
Region IVA	115	58	16	12	0	4	12	0.55	0.41	50	81	81
Region IVB	23	12	1	0	1	0	1	0.17	0.00	0	0	0
Region V	45	22	8	7	0	1	7	0.73	0.64	38	75	88
Region VI	59	29	30	24	2	4	26	2.07	1.66	36	82	86
Region VII	57	29	10	9	0	1	9	0.69	0.62	80	90	90
Region VIII	34	17	13	9	3	1	12	1.53	1.06	90	100	80
Region IX	29	14	1	0	0	1	0	0.14	0.00	100	100	100
Region X	37	18	9	8	1	0	9	1.00	0.89	75	88	100
Region XI	38	19	12	10	0	2	10	1.26	1.05	75	92	100
Region XII	36	18	9	8	1	0	9	1.00	0.89	88	88	100
ARMM	27	14	2	0	2	0	2	0.29	0.00	0	0	0
CAR	14	7	4	3	1	0	4	1.14	0.86	67	100	100
CARAGA	20	10	3	3	0	0	3	0.60	0.60	67	67	100
NCR	100	50	19	17	1	1	18	0.76	0.68	72	94	89
PHIL	788	393	178	142	17	19	159	0.91	0.72	65	87	91

**Reporting Rate:** target of 2/100K population of children less than 15 years old

**Non-Polio AFP Rate:** target of 1/100k population of children less than 15 years old

**Non-Polio (Discarded):** AFP cases classified by the expert panel committee as non-polio in which the paralysis is not caused by poliovirus

**Not AFP:** Reported AFP cases that did not fit the case definition of AFP

Legend:

Green	Reached or surpassed target
Yellow	Nearly reached target: 0.5-0.99 for non-polio AFP target; 60-79% for other indicators
Red	Substantially below target



Acute flaccid paralysis (AFP) case	Refers to any child less than 15 years of age with acute onset of floppy paralysis, or a person of any age in whom poliomyelitis is suspected by a physician.
Cluster of AFP cases	Refers to the occurrence of two or more AFP cases in one province or city with the date of paralysis onset of within 1 month of each other.
Circulating Vaccine-derived poliovirus (cVDPV)	Refers to a sub-classification of VDPV found in areas with gaps in OPV coverage; considered in the context of person-to-person transmission when non-identical but related VDPVs are identified in at least 2 AFP cases.
Confirmed polio	Refers to an AFP case that was laboratory-confirmed with wild poliovirus.
Discarded as non-polio	Refers to AFP cases classified by the expert panel committee as non-polio in which the paralysis is not caused by poliovirus.
Epidemiology	Refers to the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.
Epidemiology and Surveillance Unit (ESU)	Refers to the unit established in the Regional Offices (ROs), Provincial Health Offices (PHOs), City Health Offices (CHOs) and Rural Health Units (RHUs) that provide services on public health surveillance and epidemiology.
Hot case	Refers to an AFP case that is less than 5 years old, with less than 3 doses of OPV and has fever at the onset of asymmetrical paralysis; OR an AFP case or a person of any age whose stool specimen/s has poliovirus isolate.
Non-polio Enterovirus	Refers to enterovirus (i.e. echovirus, coxsackie virus) other than poliovirus isolated from specimens.
Oral poliovirus vaccine (OPV)	Refers to an attenuated vaccine administered orally that protects against either one (mOPV), two (bOPV) or three (tOPV) serotypes of poliovirus present in the formulation.
Philippine Integrated Disease Surveillance and Response (PIDSR)	Refers to the system whose framework embodies integrated functional disease surveillance and response system institutionalized from the national level down to the community level.
Polio compatible	Refers to an AFP case which does not have an adequate stool collected, died or was lost to follow-up.
Sabin-like	Refers to an AFP case with isolates consistent with a limited period of virus excretion or person-to-person transmission demonstrating less than 1% difference from parent OPV strains for poliovirus types 1 and 3, and less than 0.6 % difference from the type 2 OPV strain by full Viral Protein 1 sequence homology.
Vaccine-derived poliovirus (VDPV)	Refers to live, attenuated strains of the vaccine poliovirus that have undergone mutation and recombination and differ from (original) Sabin strains by 1 to 15% of VP1 nucleotides, the extent of genetic change of which is indicative of prolonged replication.
Vaccine-associated paralytic poliomyelitis (VAPP)	Refers to the only rare adverse event associated with OPV use which may occur in vaccine recipients or their contacts. The onset of symptoms with VAPP usually occurs 4-30 days following receipt of OPV or within 4-75 days after contact with a recipient of OPV. In immune-deficient individuals, VAPP may occur outside these windows.
Wild poliovirus (WPV)	Refers to the wild poliovirus that is targeted for global eradication consisting of three types: poliovirus type 1, 2 and 3.



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