



January 1-31, 2016

Epidemiology Bureau
Public Health Surveillance Division

Introduction

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. With only 2 countries left endemic to Polio (Afghanistan and Pakistan), tremendous efforts are being made by every country and different organizations for global eradication by year 2018. One of the essential strategy which aims to look for wild poliovirus (WPV) circulation or circulating vaccine-derived poliovirus (cVDPVs) in the community is Acute Flaccid Paralysis (AFP) surveillance. AFP Surveillance is an intensive case-based surveillance wherein a comprehensive set of data is collected for every case of children under 15 years of age with acute onset of paralysis or a person of any age in whom poliomyelitis is suspected by a physician. By the end of 2015, the non-polio AFP rate was 1.03 (Figure 3), with 479 reported cases. Of the reported cases, 397 were discarded as non-polio, 41 were classified as not AFP and 41 are still pending for classification. For 2016, the expected target for the number of AFP cases detected is 788.

Trend in the Philippines

A total of 18 AFP cases were reported from January 1-January 31, 2016 (See Figure 1 and 2). Of these, 12 were classified as non-polio AFP while 6 remain pending for classification. This provides the Philippines an annualized non-polio AFP rate of 0.37 per 100,000 children below 15 years old. This is lower compared to the non-polio AFP rate of 1.00 in 2015 (-63.30 % difference). (Figure 2)

The non-polio AFP rate is one of the core performance indicators to gauge the sensitivity of AFP surveillance in the country. It aims to provide a timely response if an outbreak occur. Failure to achieve the target requirement indicates that the existing surveillance system is not sufficient to detect possible transmission of polio.

The second core performance indicator is the adequacy rate of stool specimen collection in which for every AFP case reported, at least $\geq 80\%$ of the total AFP cases must have adequate stool specimen collected within 0-14 days from onset of paralysis. For the month of January 2016, the Philippines surpassed the 80% benchmark, compared to last year's performance; wherein only 56% of the total AFP cases had adequate stools collected. (Figure 7)

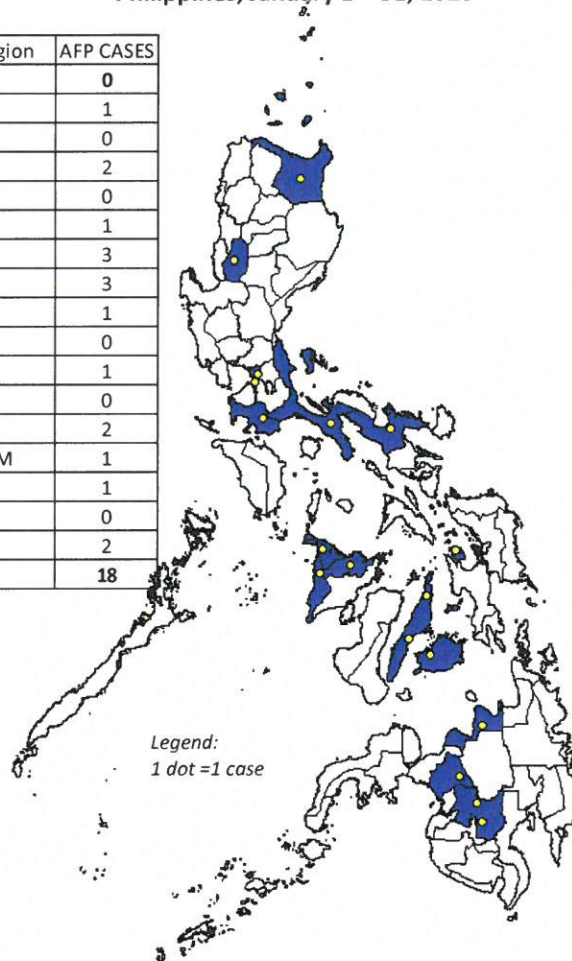
Geographic Distribution

Reported AFP cases occur variably among regions with regions VI and VII reporting the most number of cases. Clustering of AFP cases was reported from the province of North Cotabato. These cases were detected in the municipality of Kidapawan and M'Lang. Both cases have completed their OPV 3 dose. One case had onset of weakness on January 20, 2016 while the other had onset of weakness on January 21, 2016. Only 1 case was discarded since both stools turned out negative for polio isolate. The other case has yet to be classified since stool specimen result is still pending.

Among the 17 regions, only CAR achieved a non-polio AFP rate of 1.71 for the month of January. Four regions (VII, X, XII, and V) nearly reached the target for non-polio AFP rate, while regions NCR, II, IVA, VI, VIII and ARMM were substantially below the target. The rest of the regions were not able to detect AFP cases for January. (I, III, IVB, IX, XI and CARAGA)

**Figure 1. AFP Cases by Region
Philippines, January 1 – 31, 2016**

Region	AFP CASES
I	0
II	1
III	0
IVA	2
IVB	0
V	1
VI	3
VII	3
VIII	1
IX	0
X	1
XI	0
XII	2
ARMM	1
CAR	1
CRG	0
NCR	2
PHL	18

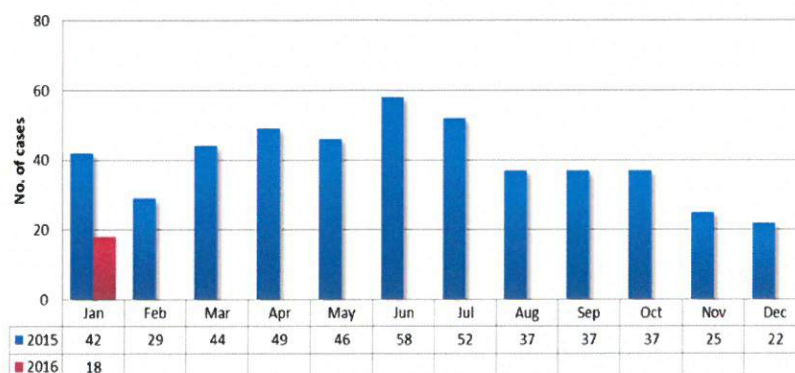




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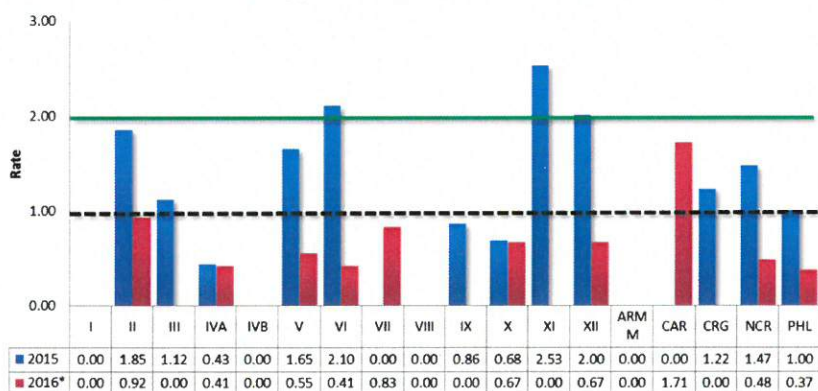
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**Figure 2. AFP Cases by Month
2015 and 2016***



*data as of Jan 1-31

**Figure 3. Annualized non-polio AFP rate per region
Philippines, January, 2015 vs. 2016***



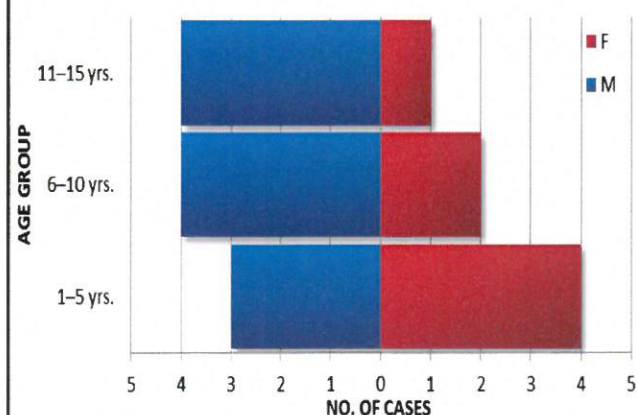
— Operational target: requirement for AFP reporting rate of 2/100K population of children less than 15 years old
- - - Minimum required target for non-polio AFP rate of 1/100K population of children less than 15 years old

*data as of Jan 1-31

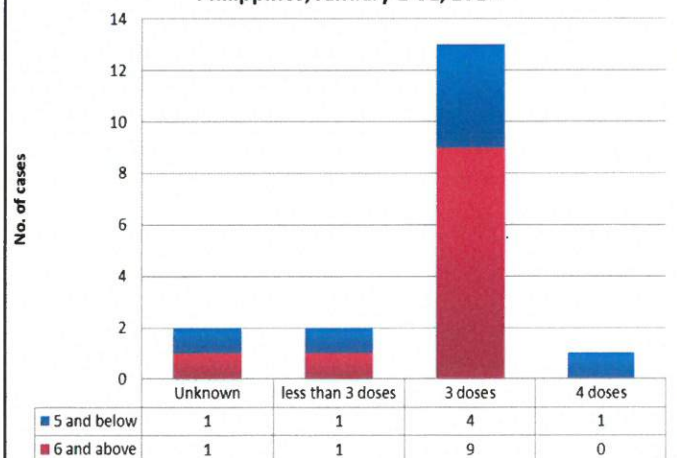
Profile of Cases

Sixty one percent (61%) of the AFP cases were male. Majority of the cases belonged to children 6 years old and above (72%) (Figure 4). Among the 18 cases, thirteen (72%) completed their OPV vaccination, two (11%) had less than 3 OPV dose received, one (6%) received 4 doses of OPV and two (11%) have unknown vaccination status. (Figure 5)

**Figure 4. Distribution of AFP cases by age and gender,
Philippines, January 1-31, 2016**



**Figure 5. OPV immunization status among AFP cases
Philippines, January 1-31, 2016**





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Polio Eradication Goals in the Philippines

The global eradication of polio has been set by 2018 with strategic objectives specific to the post-eradication era. These objectives have special implications for countries that are already polio-free including the Philippines. Part of the objectives is to detect and interrupt transmission of wild poliovirus by 2014 and any new outbreaks due to cVDPV within 120 days of confirmation of the index case. Improvement of surveillance and immunization campaigns, laboratory containment and destruction of polioviruses, and ensuring rapid outbreak responses are the key activities required to maintain our polio-free status.

The Department of Health through the Epidemiology Bureau takes part in achieving this goal by closely monitoring the standard surveillance indicators to ensure that the goal is attained and maintained. In the beginning of 2015, the Department of Health through Epidemiology Bureau funded 17 additional Disease Surveillance Officers (DSOs) for each of the 17 Regional Epidemiology and Surveillance Unit (RESU) to give focus on high quality case-based AFP surveillance. In this endeavor, AFP surveillance in the country is targeted to become more intensive as DSOs are encouraged to focus their search for AFP cases among patients that will truly manifest floppy paralysis and to closely collaborate with their catchment disease reporting facilities so that complete charting and history taking is done for all suspected AFP cases. AFP surveillance updates are being generated weekly and disseminated to every Region, NCC members, AFP expert panel committee, EPI and laboratory for feedback. Constant coordination with the National Polio Laboratory (NPL) is maintained to increase sensitivity of the system in promptly determining and prioritizing "AFP Hot Cases."

Table 1. AFP CASES AND PERFORMANCE INDICATORS BY REGION, PHILIPPINES, JANUARY 1 – 31, 2016 (N=18)

2016																
REGION	Expected AFP Rate 2016 2/100k	Expected AFP Rate 2016 1/100k	Reported Cases	Classification								Performance Indicators (Non-Polio AFP Cases)				
				Confirmed Polio	Polio Compatible	Non-Polio (Discarded)	VDPV	VAPP	Sabin- Like	NOT AFP	Pending	Annualized Reporting Rate	Annualized Non-Polio AFP RATE	% with 2 Specimens w/n 14 days of Onset	% Reported within 14 days of Onset	% Investigated Within 2 days of Report
Region I	39	19	0	0	0	0	0	0	0	0	0	0.00	0.00	-	-	-
Region II	27	13	1	0	0	1	0	0	0	0	0	0.92	0.92	100	100	100
Region III	88	44	0	0	0	0	0	0	0	0	0	0.00	0.00	-	-	-
Region IVA	115	58	2	0	0	2	0	0	0	0	0	0.41	0.41	100	100	100
Region IVB	23	12	0	0	0	0	0	0	0	0	0	0.00	0.00	-	-	-
Region V	45	22	1	0	0	1	0	0	0	0	0	0.55	0.55	100	100	100
Region VI	59	29	3	0	0	1	0	0	0	0	2	1.24	0.41	67	100	100
Region VII	57	29	3	0	0	2	0	0	0	0	1	1.24	0.83	67	100	67
Region VIII	34	17	1	0	0	0	0	0	0	0	1	0.71	0.00	100	100	0
Region IX	29	14	0	0	0	0	0	0	0	0	0	0.00	0.00	-	-	-
Region X	37	18	1	0	0	1	0	0	0	0	0	0.67	0.67	100	100	100
Region XI	38	19	0	0	0	0	0	0	0	0	0	0.00	0.00	-	-	-
Region XII	36	18	2	0	0	1	0	0	0	0	1	1.33	0.67	100	100	100
ARMM	27	14	1	0	0	0	0	0	0	0	1	0.86	0.00	0	0	100
CAR	14	7	1	0	0	1	0	0	0	0	0	1.71	1.71	100	100	100
CARAGA	20	10	0	0	0	0	0	0	0	0	0	0.00	0.00	-	-	-
NCR	100	50	2	0	0	2	0	0	0	0	0	0.48	0.48	100	100	50
PHIL	788	393	18	0	0	12	0	0	0	0	6	0.55	0.37	83	94	83

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

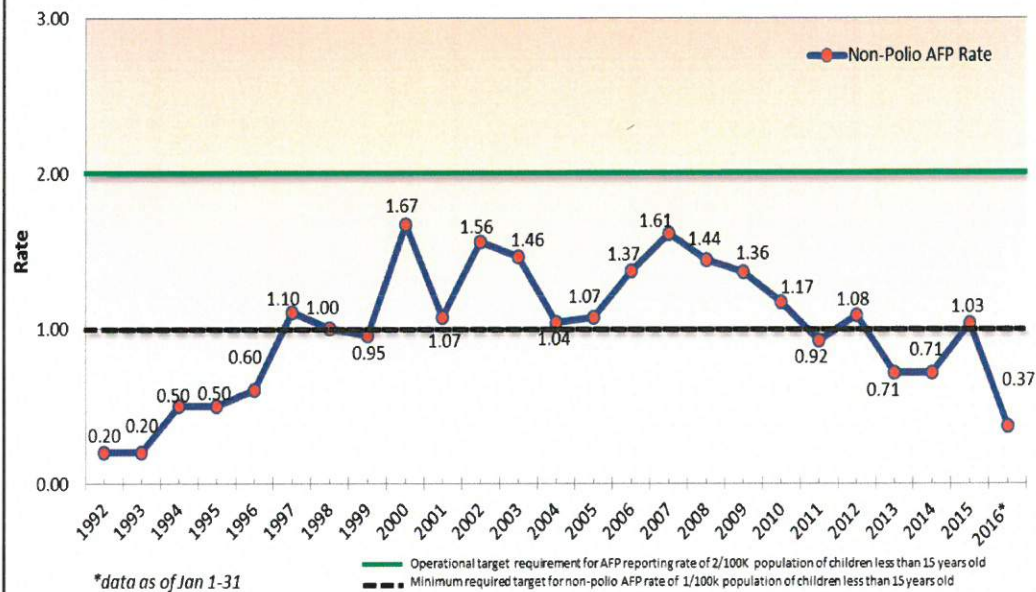
NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.



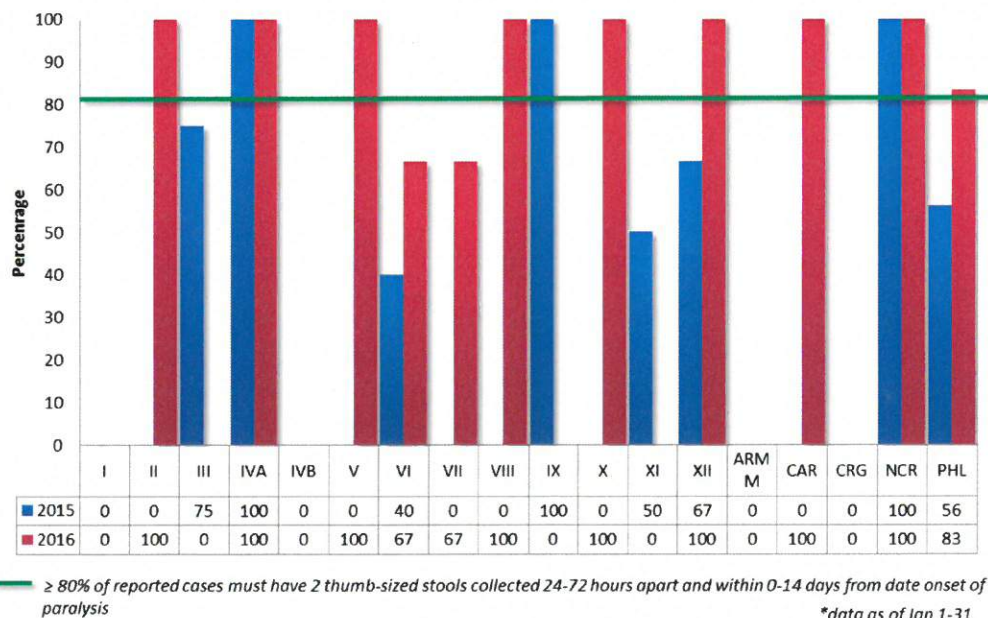
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**Figure 6. Trend of non-polio AFP Rate in the Philippines
1992-2016***



**Figure 7. Adequate stool specimen collection rate per region
January, 2015 vs. 2016***



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.



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Definition of Terms:

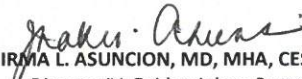
Acute flaccid paralysis (AFP) case	Refers to any child less than 15 years of age with acute onset of floppy paralysis, or a person of any age in whom poliomyelitis is suspected by a physician.
Cluster of AFP cases	Refers to the occurrence of two or more AFP cases in one province or city with the date 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.

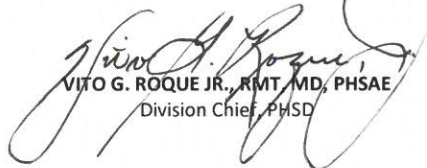


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