



Vaccine Preventable Disease (VPD) Surveillance

The goal of VPD surveillance is to improve the capacity of the health system to prevent and control through timely detection and appropriate response to vaccine preventable diseases with high level of morbidity, disability and mortality. This report provides data from the period of January 1 to April 27, 2019 or Morbidity Weeks 1 -17 (Table 1).

Table 1. Summary of Reported Vaccine Preventable Diseases, Philippines, January 1 – April 27, 2019

Vaccine Preventable Diseases	Total No of Cases	Confirmed Cases		
		Cases	Deaths	CFR %
Measles	33,900	-	-	-
Rubella		-	-	-
Diphtheria	55	7	4	57
Pertussis	47	7	1	14
Neonatal Tetanus	15	15	7	47
Polio (AFP Surveillance)	341	-	-	-

PIDSR Case Definition for Vaccine Preventable Diseases

MEASLES	
Reported Measles Case (Suspect measles case)	Any person with fever and maculopapular (non-vesicular) rash and either cough, coryza (runny nose), or conjunctivitis (red eyes)
Measles compatible case (Clinical Measles)	A suspect case for which - no adequate blood specimen was taken, OR - is not an epidemiological link to a confirmed case of measles or rubella, OR - laboratory confirmation is still pending
Confirmed measles case	A suspect with positive laboratory for measles or epidemiologically linked cases
Epidemiologically Linked (Epi-linked)	A suspect case that has not been confirmed by laboratory but has close contact and temporally related to a laboratory confirmed case or to another epi-linked case during times of epidemic
Laboratory confirmed rubella	A suspect case with a positive laboratory test result for rubella-specific IgM antibodies or other approved laboratory test method
Discarded non-measles/rubella	A suspect case that meets the clinical case definition for measles and tested negative for both measles and rubella testing
NEONATAL TETANUS	
Clinically Confirmed Neonatal Tetanus	<ul style="list-style-type: none"> Any neonate (≤ 28 days of life) that sucks and cries normally during the first 2 days of life, and becomes ill between 3 to 28 days of age and develops both an inability to suck and diffuse muscle rigidity (stiffness) and spasms (jerking of the muscles), which may include trismus, clenched fists or feet, continuously pursed lips, and/or curved back (opisthotonus); OR A neonate between 3 to 28 days of life, diagnosed as a case of tetanus by a physician.
DIPHTHERIA	
Probable case	A person with an illness of the upper respiratory tract characterized by laryngitis or pharyngitis or tonsillitis, and adherent membranes on tonsils, pharynx and/or nose.
Confirmed case	A probable case that is laboratory confirmed or linked epidemiologically to a laboratory-confirmed case.
<i>Note: Persons with positive Corynebacterium diphtheriae cultures who do not meet the clinical description (i.e. asymptomatic carriers) should not be reported as probable or confirmed diphtheria cases.</i>	
PERTUSSIS	
Clinical Case	A person with a cough lasting at least 2 weeks with at least one of the following: - paroxysms (i.e. fits) of coughing - inspiratory "whooping" - post-tussive vomiting (i.e. vomiting immediately after coughing) - without other apparent cause
Clinically-confirmed case	- A case that meets the clinical case definition but is not laboratory confirmed.
Probable case	Meets the clinical case definition, is not laboratory confirmed, and is not epidemiologically linked to a laboratory-confirmed case
Laboratory-confirmed case	<ul style="list-style-type: none"> - A case of acute cough illness of any duration with a positive culture for B. pertussis; OR - A case that meets the clinical case definition and is confirmed by PCR; OR - A case that meets the clinical definition and is epidemiologically linked directly to a case confirmed by either culture or PCR.
ACUTE FLACCID PARALYSIS	
Reported AFP Case (suspect AFP case)	Any child less than 15 years of age who developed an acute onset of floppy paralysis OR A person of any age in whom poliomyelitis is suspected by the physician AFP "hotcase" An AFP case with no or less than 3 OPV dose and had FEVER at onset of paralysis

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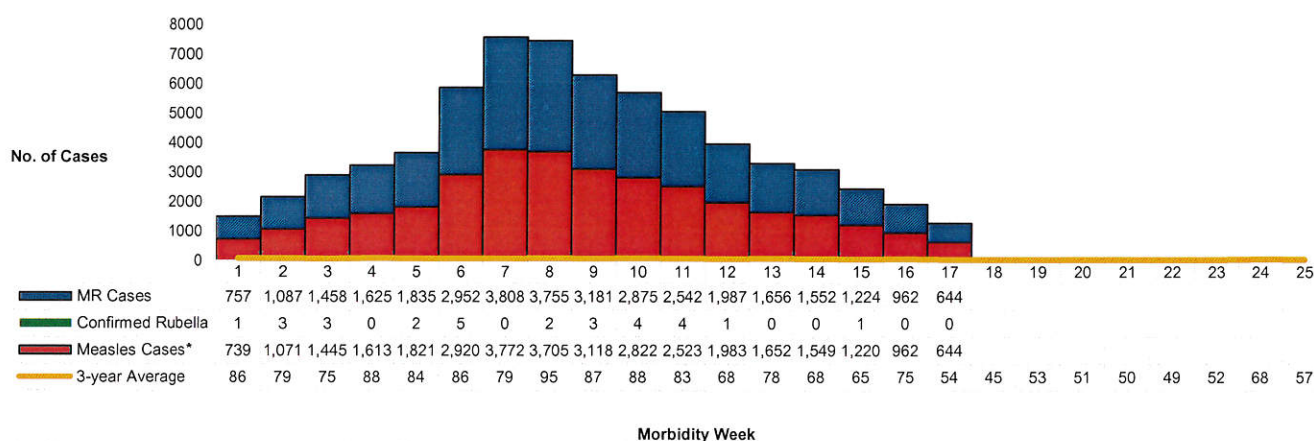
I. MEASLES-RUBELLA

Suspect Cases

Trend in the Philippines

A total of 33,900 suspect measles-rubella cases were reported from January 1 to April 27, 2019. The distribution of reported cases for 2019 compared to the 3-year average of cases from 2015-2017 is shown below (Figure 1).

Figure 1. Reported Measles-Rubella Cases by Case Classification and Morbidity Week, Philippines, January 1 to April 27, 2019 (N=33,900)



*Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, measles compatible, and pending

Geographic Distribution

From January 1 to April 27, 2019 or morbidity weeks 1 to 17, cases are 314% higher than the number of cases reported during the same time period last year (8,182). Most of the reported cases were from the following regions: NCR (6,603, 19%), IVA (6,338, 19%), Region III (5,640 or 17%), Region VI (2,080 or 6%) and Region X (1,716 or 5%) (Table 1). Majority of regions showed increase in the number of reported measles cases compared to 2018 except for Regions IX, XI, XII and BARMM.

Table 1. Reported Measles-Rubella Cases by Region, Philippines, January 1 to April 27, 2019 (N=33,900) vs. January 1 to April 27, 2018

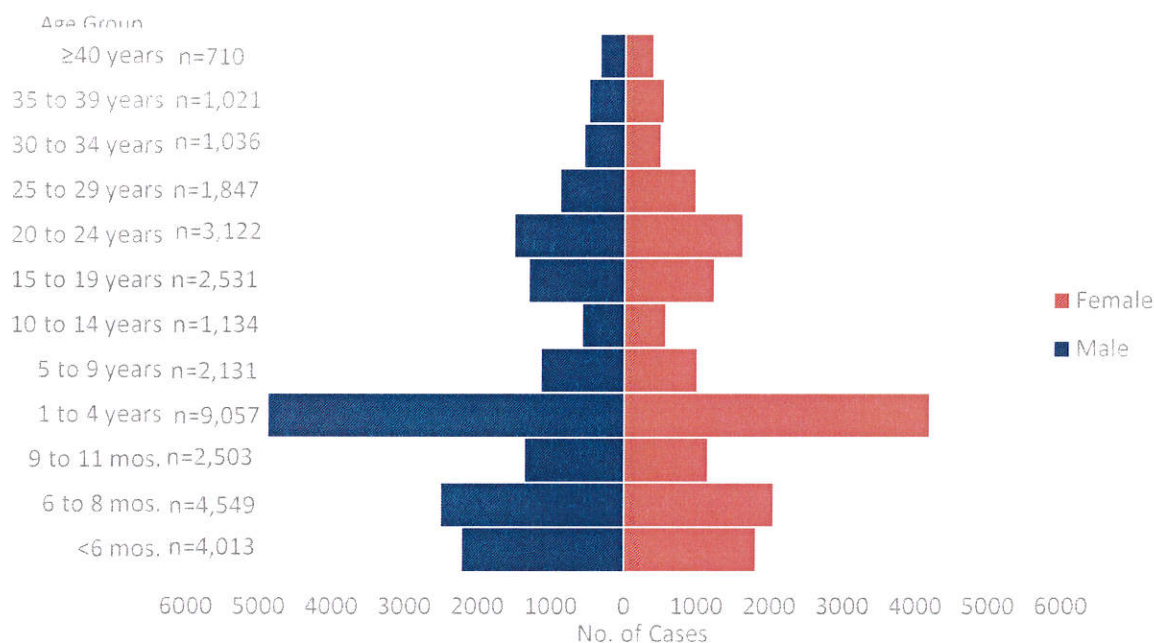
Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHL	33,900	469	8,182	66	↑ 314
I	1,539	17	145	0	↑ 961
II	528	2	34	0	↑ 1,453
III	5,640	106	282	4	↑ 1,900
IVA	6,338	118	260	2	↑ 2,338
MIMAROPA	1,445	15	28	0	↑ 5,061
V	1,006	7	32	0	↑ 3,044
VI	2,080	7	150	0	↑ 1,287
VII	1,605	12	182	1	↑ 782
VIII	1,390	30	20	0	↑ 6,850
IX	433	1	993	6	↓ 56
X	1,716	10	751	1	↑ 128
XI	823	11	1,090	13	↓ 24
XII	667	4	797	7	↓ 16
BARMM	567	6	2,514	20	↓ 77
CAR	582	2	42	0	↑ 1,286
CARAGA	938	9	102	1	↑ 820
NCR	6,603	112	760	11	↑ 769



Profile of Reported Cases

Majority (17,834 or 53%) of the reported cases were male. Ages of cases ranged from **less than 1 month to 88 years old** (median age of 3 years). Age groups with the most number of cases were: 1-4 years old (9,057 or 27%), 6 to 8 months old (4,549 or 13%) and less than 6 months old (4,013 or 12%) (Figure 2).

Figure 2. Reported Measles-Rubella Cases by Age Group and Sex, Philippines, January 1 to April 27, 2019 (N=33,900)*



*246 cases with unspecified age

Majority (19,655 or 58%) of the cases were not vaccinated (Figure 3). Top reasons for non-vaccination of measles-containing vaccine were: not eligible for vaccination (44%), mother was busy (17%), and child was sick (13%) (Figure 4).

Figure 3. Vaccination Status of Reported Measles-Rubella Cases, Philippines, January 1 to April 27, 2019 (N=33,900)

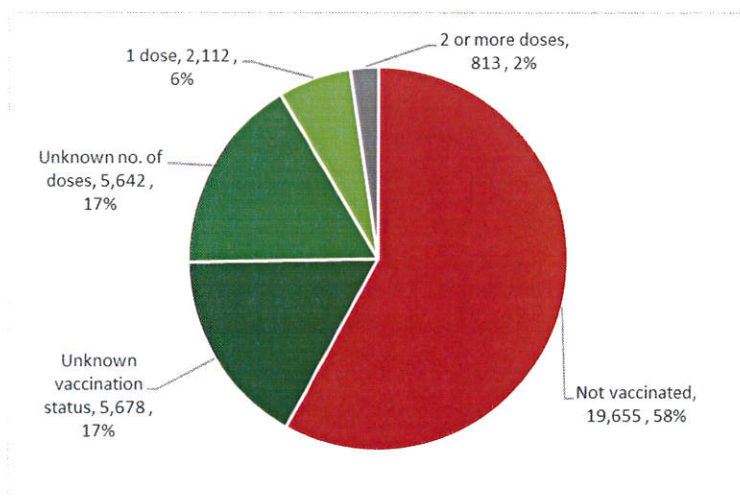
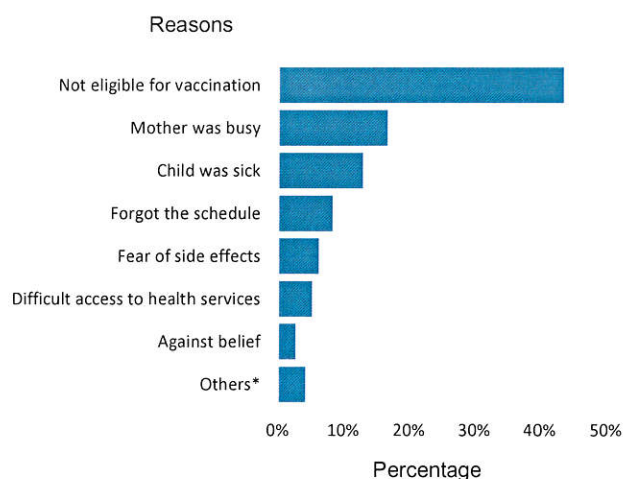


Figure 4. Reasons for Non-vaccination of Measles Vaccine*, Philippines, January 1 to March 30, 2019



*with available data

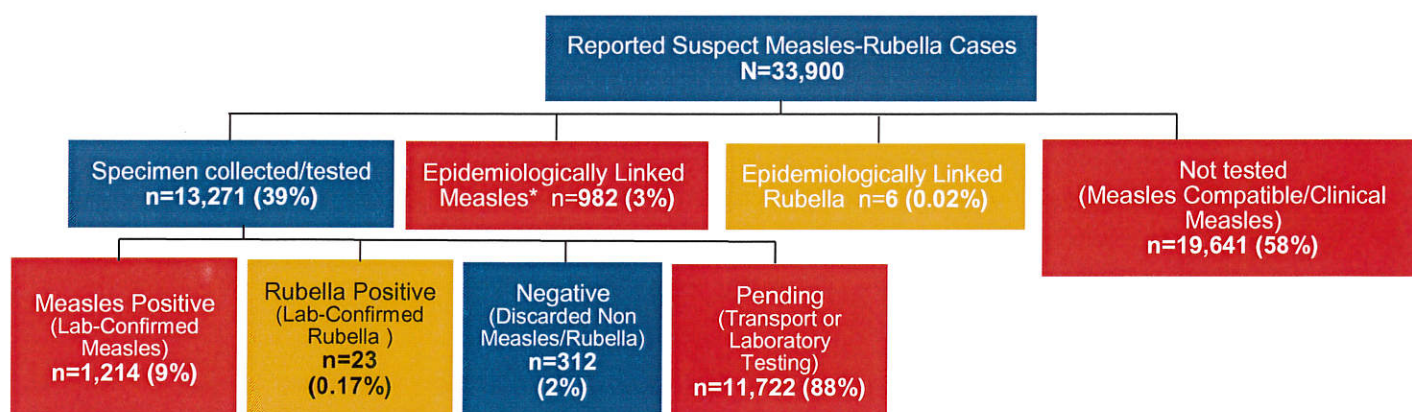
*other reasons: moves residence, lack of knowledge, history of travel, medical contraindication, refused vaccination, flood during immunization, received other vaccine, pregnant, mother was sick, lost vaccination card, child not available, card was left, laziness, with disaster



Case Classification

Among the 33,900 reported cases, a total of 13,271 (39%) cases had specimens collected/tested for measles/rubella IgM and/or PCR. Among the tested cases, 1,214 (9%) were positive for measles and 23 (0.17%) were positive for rubella. Nine hundred eighty two (982 or 3%) cases were epidemiologically-linked to laboratory confirmed cases, hence also classified as confirmed measles cases (Figure 5).

Figure 5. Reported Measles-Rubella Cases by Case Classification, Philippines, January 1 to April 27, 2019 (N=33,900)



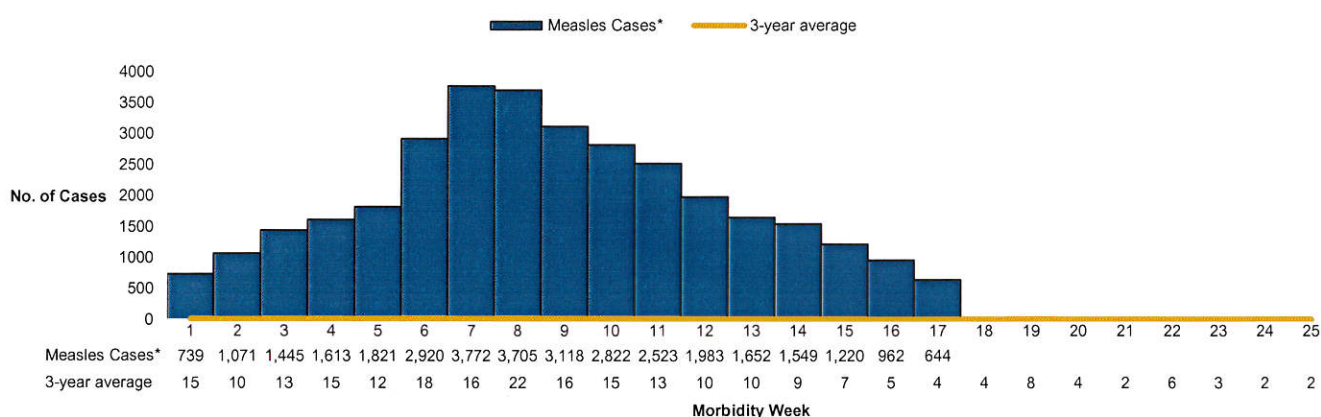
Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, measles compatible and pending (n=33,559)

Measles Cases

Trend in the Philippines

There were 33,559 measles cases with 466 death (CFR=1.4%). The distribution of measles cases for 2019 compared to the 3-year average of cases from 2015-2017 is shown in Figure 6.

Figure 6. Measles Cases by Morbidity Week, Philippines, January 1 to April 27, 2019 (n=33,559)



*Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, measles compatible and pending (n=26,956)



Geographic Distribution

Most of the measles cases were from the following regions: NCR (6,574 or 20%), Region IVA (6,306 or 19%), Region III (5,600 or 17%), Region VI (2,019 or 6%) and Region X (1,705 or 5%). Measles cases in 2019 increased by 337% compared to the same period in 2018 (Table 2). Majority of regions showed increase in the number of reported measles cases compared to 2018 except for Regions IX, XI, XII, and BARMM.

Top 5 provinces with measles cases include: Rizal (2,900 or 9%), Bulacan (1,682 or 5%), Pampanga (1,389 or 4%), Pangasinan (1,148 or 3%, and Laguna (1,111 or 3%).

Top 5 municipalities with measles cases include: Quezon City (1,934 or 6%), Manila (1,213 or 4%), Antipolo City (1,058 or 3%), Caloocan City (705 or 2%) and Biñan (448 or 1%).

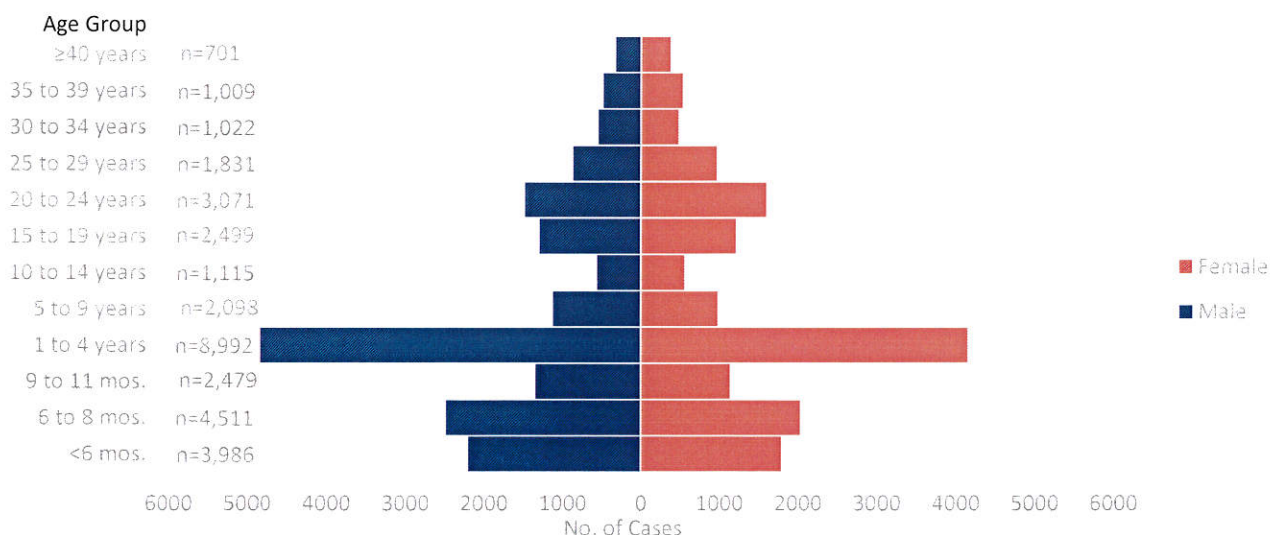
**Table 2. Measles Cases by Region,
Philippines, January 1 to April 27, 2019 (n=33,559) vs. January 1 to April 27, 2018**

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHL	33,559	466	7,680	65	↑ 337
I	1,509	17	113	0	↑ 1,235
II	518	2	24	0	↑ 2,058
III	5,600	106	236	4	↑ 2,273
IVA	6,306	117	211	2	↑ 2,889
MIMAROPA	1,442	15	23	0	↑ 6,170
V	989	7	24	0	↑ 4,021
VI	2,019	7	103	0	↑ 1,860
VII	1,583	11	154	1	↑ 928
VIII	1,389	30	16	0	↑ 8,581
IX	429	1	964	5	↓ 55
X	1,705	10	725	1	↑ 135
XI	804	11	1,023	13	↓ 21
XII	647	4	745	7	↓ 13
BARMM	566	6	2,503	20	↓ 77
CAR	552	2	24	0	↑ 2,200
CARAGA	927	9	83	1	↑ 1,017
NCR	6,574	111	709	11	↑ 827

Profile of Measles Cases

Majority (17,658, 53%) of the measles cases were male. Ages of cases ranged from **less than 1 month to 88 years old** (median age of 3 years). Age groups with the most number of cases were: 1-4 years old (8,992 or 27%), 6-8 months old (4,511 or 13%), and less than 6 months old (3,986, 12%) (Figure 7).

**Figure 7. Measles Cases by Age Group and Sex,
Philippines, January 1 to April 27, 2019 (n=33,559)***



*246 cases with unspecified age

Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases. All 2019 data reflects partial data only of all regions.

A PDF file of this report is available at www.doh.gov.ph/statistics.



Majority (19,514 or 58%) of the measles cases were not vaccinated (Figure 8). Top reasons for non-vaccination of measles-containing vaccine among confirmed cases were: not eligible for vaccination (44%), mother was busy (17%) and child was sick (13%) (Figure 9).

Figure 8. Vaccination Status of Measles Cases, Philippines, January 1 to April 27, 2019 (n=33,559)

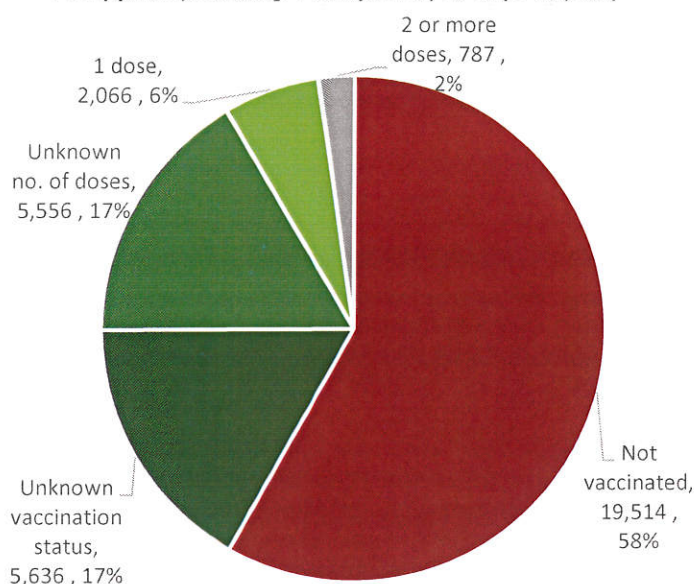
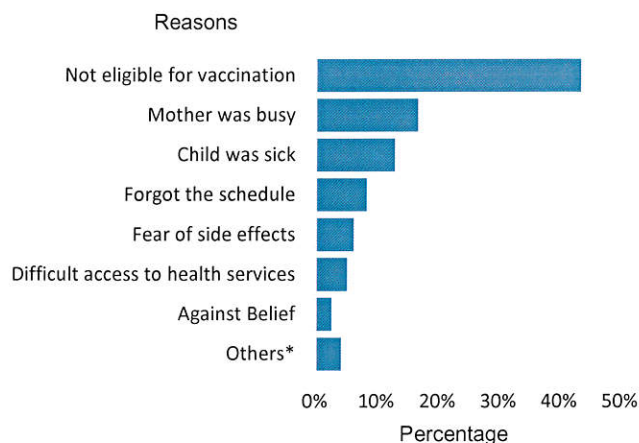


Figure 9. Reasons for Non-vaccination of Measles Vaccine among Measles Cases*, Philippines, January 1 to April 27, 2019



*with available data

*other reasons: moves residence, lack of knowledge, history of travel, medical contraindication, refused vaccination, flood during immunization, received other vaccine, pregnant, mother was sick, lost vaccination card, child not available, card was left, laziness, with disaster

Profile of Measles Death

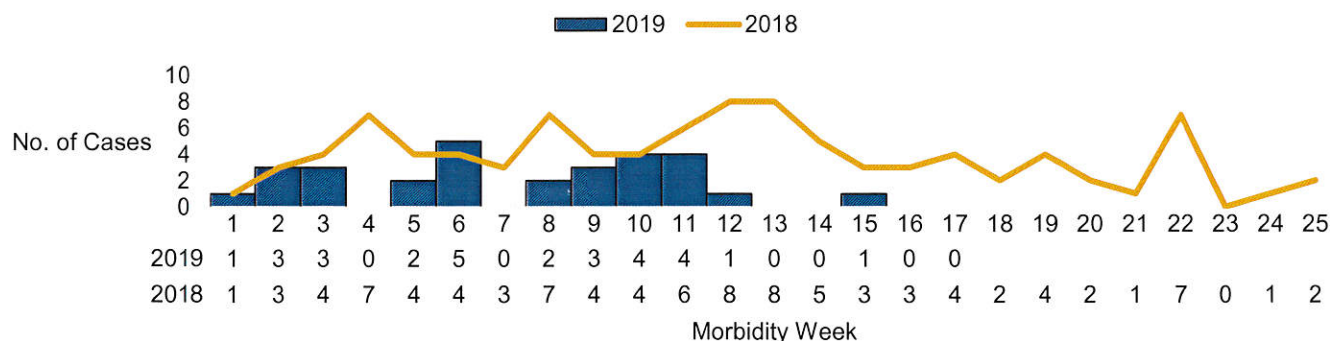
There were 466 deaths (CFR=1.4%) out of the 33,559 measles cases. Ages of deaths ranged from **less than 1 month – 37 years old** (median of 1 year). Top 3 age groups with highest number of deaths were: 1-4 years (197 or 42%), less than 6 months (106 or 23%), and 6-8 months (86, 18%). Majority (370 or 79%) of deaths were not vaccinated.

Confirmed Rubella Cases

Trend in the Philippines

There were 29 confirmed rubella cases from January 1 to April 27, 2019. The distribution of confirmed rubella cases for 2019 compared to 2018 is shown in Figure 10.

Figure 10. Confirmed Rubella Cases by Morbidity Week, Philippines, 2019 vs 2018 (n=29)





Geographic Distribution

There were reported confirmed rubella cases in all regions except for regions MIMAROPA, VII, VIII, and BARMM. This is 75% lower compared to the same time period in 2018 (63). However, Regions III and VI had 100% increased number of confirmed rubella cases compared to 2018. No deaths were reported (Table 3).

Table 3. Confirmed Rubella Cases by Region, Philippines, January 1 to April 27, 2019 (n=29) vs. January 1 to April 27, 2018

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHL	29	0	78	0	↓ 63
I	2	0	4	0	↓ 50
II	1	0	2	0	↓ 50
III	8	0	4	0	↑ 100
IVA	3	0	13	0	↓ 77
MIMAROPA	0	0	1	0	↓ 100
V	1	0	0	0	-
VI	4	0	2	0	↑ 100
VII	0	0	4	0	↓ 100
VIII	0	0	1	0	↓ 100
IX	1	0	3	0	↓ 67
X	1	0	3	0	↓ 67
XI	4	0	17	0	↓ 76
XII	1	0	12	0	↓ 92
BARMM	0	0	2	0	↓ 100
CAR	1	0	2	0	↓ 50
CARAGA	1	0	1	0	0
NCR	1	0	7	0	↓ 86

Profile of Rubella Case

Majority (16 or 55%) of confirmed rubella cases were females. Age of cases ranged from **7 months to 38 years old** (median of 17 years). The most affected age groups were 15 to 19 and 20 to 24 years (5 or 17%). (Figure 11).

Most (11 or 38%) of the confirmed rubella cases were vaccinated but with unknown number of doses. Only 1 (6%) case was reported to have 2 or more doses of measles-containing vaccine which may be MMR (measles-mumps-rubella), the vaccine with rubella component (Figure 12).

Figure 11. Confirmed Rubella Cases by Age Group and Sex, Philippines, January 1 to April 27, 2019 (n=29)

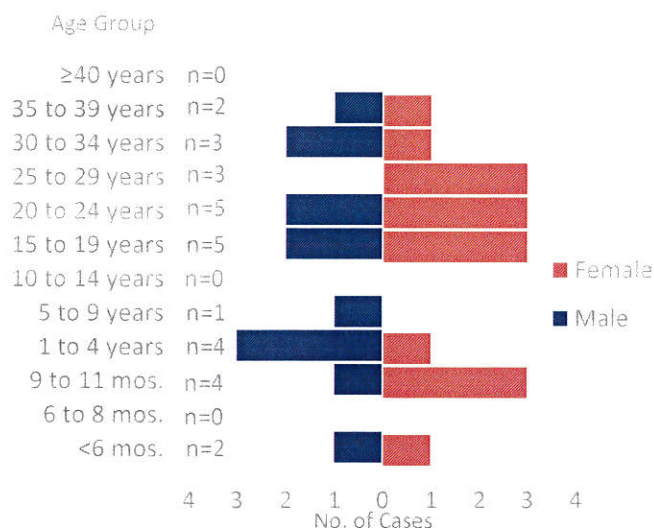
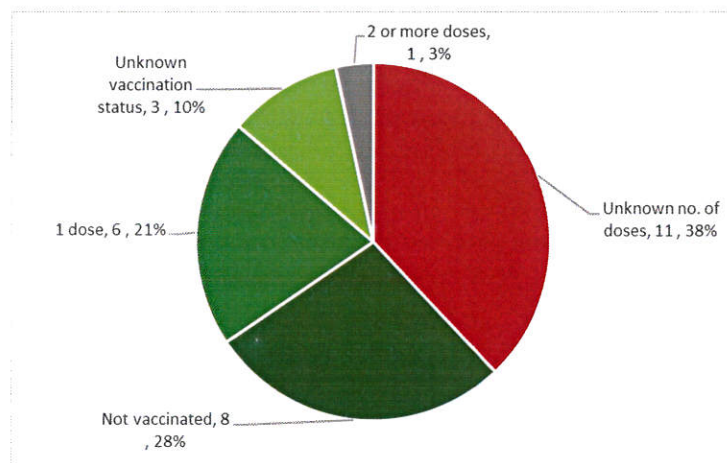


Figure 12. Vaccination Status of Confirmed Rubella Cases, Philippines, January 1 to April 27, 2019 (n=29)





Measles Surveillance Performance Indicators

Table 3 presents the surveillance performance of regions based on the indicators for measles surveillance as part of the measles elimination strategies. The surveillance indicators gauge the capacity of the country in achieving the measles elimination goal.

On February 2019, measles outbreak was declared initially in NCR followed by regions in Luzon, Central, and Eastern Visayas. Due to increased number of reported cases, selective laboratory testing of specimens were done and advised epi-linking of cases. Thus, surveillance performance indicators on the incidence rate, timeliness and adequacy of blood collection, timeliness and adequacy of case investigation, annualized non-measles/non-rubella reporting and measles compatible cases were below the target. However, Regions VI and CAR have met the target on annualized non-measles/non-rubella reporting with rate 2.17 and 4.82 respectively. Suspect measles reporting target of 2 per 100,000 population was achieved due to the increased number of cases reported.

Table 3. Measles Surveillance Performance Indicators by Region, Philippines, January 1 to April 27, 2019 vs. January 1 to April 27, 2018

REGION	ANNUALIZED MEASLES INCIDENCE RATE		TIMELINESS & ADEQUACY OF BLOOD COLLECTION		TIMELINESS & ADEQUACY OF CASE INVESTIGATION		ANNUALIZED SUSPECT MEASLES REPORTING RATE		ANNUALIZED NON-MEASLES/ NON-RUBELLA REPORTING RATE		PERCENTAGE OF MEASLES COMPATIBLE	
	Target: <1/1,000,000 Pop.		Target: ≥80%		Target: ≥80%		Target: ≥2/100,000 Pop.		Target: ≥2/100,000 Pop.		Target: <10%	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
I	12.72	56.07	79	61	31	28	8.39	88.05	1.62	1.60	63	92
II	2.51	32.26	85	71	18	16	2.85	43.67	0.67	0.74	62	91
III	24.52	58.02	89	62	66	33	7.13	139.84	1.06	0.79	49	95
IVA	9.85	43.67	73	29	28	14	5.02	119.30	0.70	0.55	62	96
MIMAROPA	2.91	65.95	43	8	21	3	2.72	138.10	0.39	0.29	71	95
V	5.98	30.03	75	29	19	12	1.60	49.52	0.40	0.79	38	92
VI	18.49	31.23	96	67	33	26	5.78	79.22	1.73	2.17	37	93
VII	39.86	49.50	93	61	48	17	7.04	61.11	0.93	0.84	28	91
VIII	3.23	3.82	85	22	35	11	1.29	88.51	0.19	0.06	55	99
IX	240.97	11.82	71	43	36	23	79.23	34.13	2.07	0.24	67	96
X	115.80	102.50	73	45	48	25	45.77	102.86	1.40	0.60	71	89
XI	164.37	114.57	74	65	34	29	63.53	47.14	2.91	0.86	68	73
XII	187.23	53.88	93	62	51	33	49.74	40.84	2.50	1.16	56	84
ARMM	389.50	20.55	34	21	14	8	183.37	40.17	0.66	0.07	78	95
CAR	6.73	199.36	83	76	50	18	7.06	96.69	2.69	4.82	48	74
CRG	37.85	18.68	73	20	26	6	11.35	103.09	2.00	1.10	48	97
NCR	78.11	132.53	76	23	35	5	16.91	144.65	0.98	0.61	47	90
PHL	66.15	60.99	65	41	32	17	23.12	94.15	1.20	0.87	65	93
LEGEND:												
<1		≥1		≥80%		<80%		≥80%		<80%		≥2/100,000 Pop.
<1		≥1		≥80%		<80%		≥80%		<80%		<2/100,000 Pop.
<1		≥1		≥80%		<80%		≥80%		<80%		≥2/100,000 Pop.
<1		≥1		≥80%		<80%		≥80%		<80%		<2/100,000 Pop.
<1		≥1		≥80%		<80%		≥80%		<80%		<10%
<1		≥1		≥80%		<80%		≥80%		<80%		≤50%
<1		≥1		≥80%		<80%		≥80%		<80%		>50%

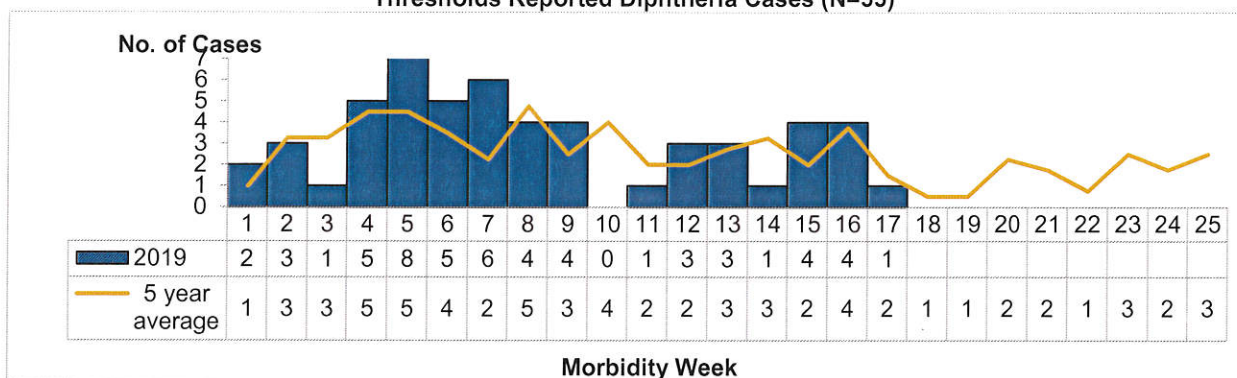


II. DIPHTHERIA

Trend in the Philippines

A total of **55** diphtheria cases were reported nationwide from January 1 – April 27, 2019. The distribution of diphtheria cases for 2019 compared to the 5 - year average of cases from 2014 to 2018 is shown below (Figure 13).

Figure 13. Reported Diphtheria Cases by Morbidity Weeks 1 - 17 (January 1 – April 27, 2019) vs Epidemic and Alert Thresholds Reported Diphtheria Cases (N=55)



Geographic Distribution

There has been an **8%** increase of diphtheria cases from 51 cases in 2018 to 55 cases in 2019, same time period. Majority of reported diphtheria cases came from NCR (20 or 36%) followed by Region IVA with 9 or 16%. Region with the **highest increase in the percent change** was Region VI with 300% increase (Table 4). Seven (13%) were laboratory confirmed out of 55 cases. One (1) cluster was identified as of April 27, 2019. A cluster is defined as two or more diphtheria cases from the same barangay reported within four consecutive weeks (Annex A).

Top 5 provinces with diphtheria cases include: Bulacan and Rizal with 5 (9%) each, Laguna, Negros Occidental and Zamboanga del Sur with 3 (5%) each.

Table 4. Reported Diphtheria Cases by Region, Philippines, January 1 to April 27, 2019 (N=55) vs. January 1 to April 27, 2018

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHL	55	15	51	13	↑8
I	2	0	1	1	↑100
II	0	0	0	0	-
III	6	0	10	2	↓40
IVA	9	1	10	2	↓10
MIMAROPA	1	1	0	0	↑
V	2	1	1	1	↑100
VI	4	1	1	0	↑300
VII	0	0	2	0	↓100
VIII	0	0	1	0	↓100
IX	5	0	0	0	↑
X	0	0	0	0	-
XI	1	0	2	1	↓50
XII	2	2	0	0	↑
ARMM	2	2	3	2	↓33
CAR	1	0	0	0	↑
CARAGA	0	0	0	0	-
NCR	20	7	20	4	0

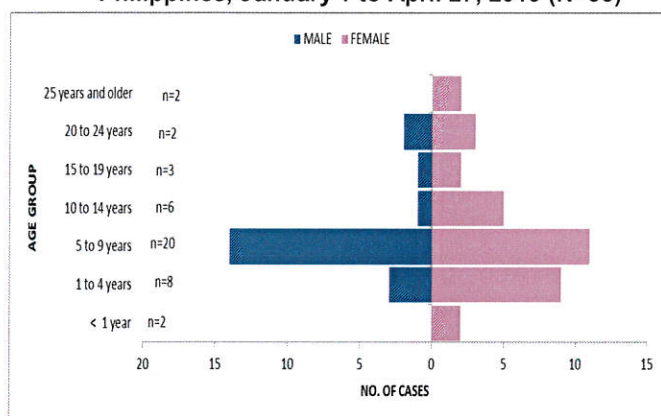


Profile of Cases

A. Cases

There were **21 males (38%)** and **34 females (62%)** among the reported diphtheria cases. Age of cases ranged from **10 months to 82 years old** (median age of 7 years). Age groups with most number of cases were **5 – 9 years old (25 or 45%)**, followed by **1 – 4 years old** with (12 or 22%) (Figure14).

Figure 14. Diphtheria Cases by Age Group and Sex, Philippines, January 1 to April 27, 2019 (N=55)



Vaccination status showed that **(11 or 20%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. 28 (51%) did not receive a dose of the DPT/Pentavalent vaccine (Figure 15).

Figure 15. Reported Diphtheria Cases by DPT Dose Received, Philippines, January 1 to April 27, 2019 (N=55)

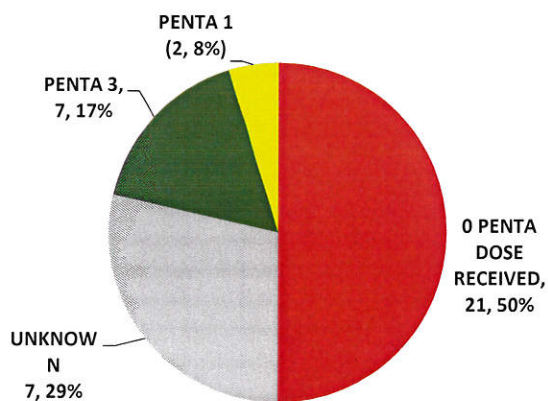
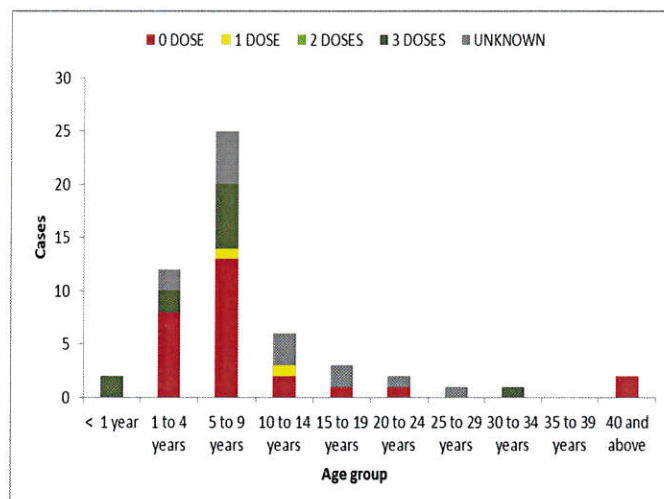


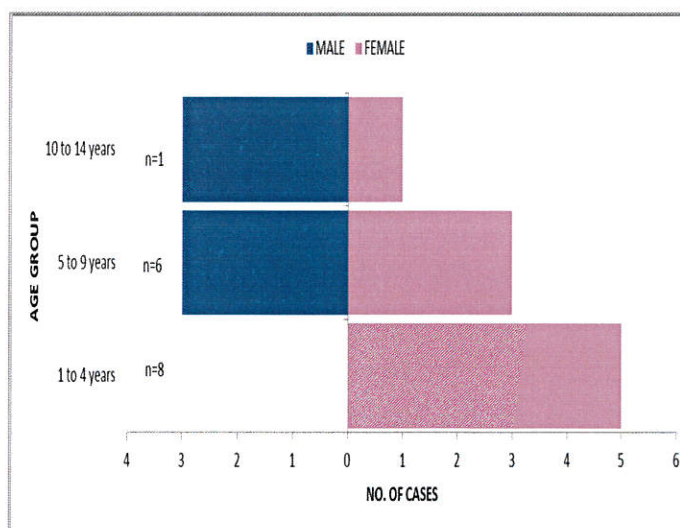
Figure 16. Diphtheria Cases by Age Group and DPT Dose Philippines, January 1 to April 27, 2019 (N=55)



B. Deaths

There were **15 deaths (CFR=27%)** among the 55 reported diphtheria cases. Ages of deaths ranged from 1 to 11 years old (median age of 5 years). Age groups with the most number of deaths was **1 – 4 years 8 (53%)** followed by **5 - 9 years old** (6 or 40%) (Figure16).

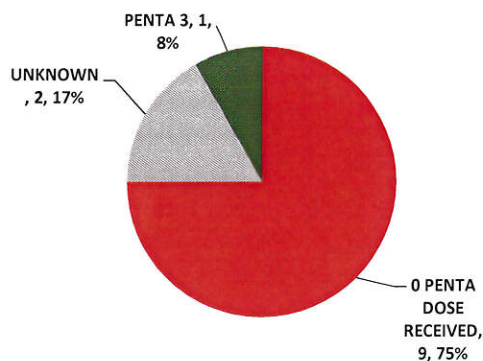
Figure 17. Reported Diphtheria Deaths by Age Group and Sex, Philippines, January 1 to April 27, 2019 (n=15)





Vaccination status showed that Majority 11 (73%) of the reported deaths did not received the DPT/Pentavalent vaccine while 1 (7%) receive 3 doses of the DPT/Pentavalent vaccine and 3 (20%) had unknown vaccination status. (Figure17).

**Figure 18. Diphtheria Deaths
by DPT Dose Received,
Philippines, January 1 to April 27, 2019 (n=15)**



C. Confirmed Cases

Four (57%) **males** and 3 (43%) **females** were laboratory confirmed diphtheria cases. Age ranges from 2 – 12 years old (median of 6 years old). 5 (71%) did not receive DPT/Pentavalent vaccine and 2 (29%) have unknown vaccination status.

D. Profile of Confirmed Diphtheria Deaths

There were Four (4) deaths among seven (7) laboratory confirmed pertussis cases. Ages of reported deaths were 2 – 6 years old (median of 3 years old). All reported laboratory confirmed deaths did not received DPT/Pentavalent vaccines.

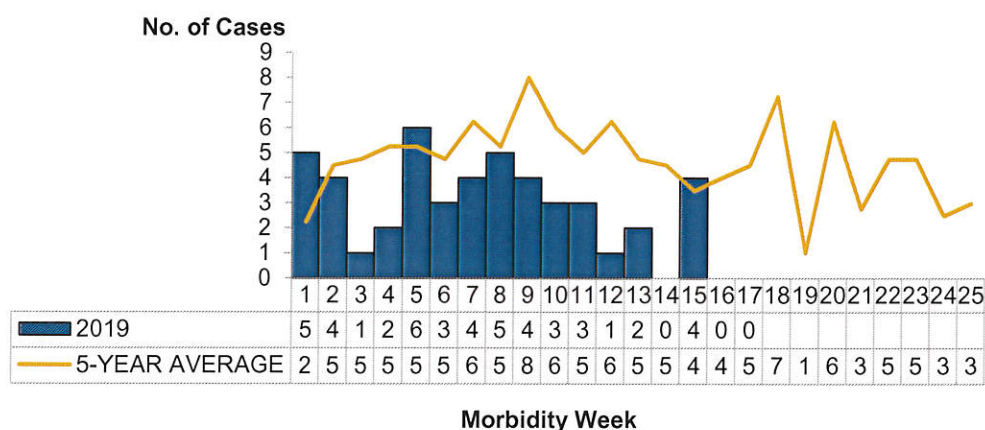


III. PERTUSSIS

Trend in the Philippines

A total of **47** pertussis cases were reported nationwide from January 1 – April 27, 2019. The distribution of pertussis cases for 2019 compared to the 5 - year average of cases from 2014 to 2018 is shown below (Figure 18).

Figure 19. Reported Pertussis Cases by Morbidity Week, Philippines, January 1 to April 27, 2019 (N=47)



Geographic Distribution

There has been a **64%** decrease among the reported pertussis cases with 131 cases in 2018 and 47 cases in 2019, same time period. Reported pertussis cases came from NCR reported to have (14 or 30%) followed by Region XI with (9 or 19%) cases (Table 5). 7 (15%) cases were confirmed out of 47 cases. Two reported Pertussis clusters identified as of April 27, 2019. A cluster is defined as two (2) or more pertussis cases from the same barangay reported within four (4) consecutive weeks.

Table 6. Reported Pertussis Cases by Region, Philippines, January 1 to April 27, 2019 (N=47) vs. January 1 to April 27, 2018

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHL	47	3	131	8	↓64
I	3	0	3	0	0
II	7	0	4	2	↑75
III	2	0	19	1	↓89
IVA	2	0	18	1	↓89
MIMAROPA	0	0	0	0	-
V	0	0	1	0	↓100
VI	1	0	2	0	↓50
VII	4	0	14	1	↓71
VIII	0	0	0	0	-
IX	0	0	0	0	-
X	1	1	2	0	↓50
XI	9	1	12	2	↓25
XII	1	0	1	0	↑
ARMM	0	0	3	0	↓100
CAR	3	0	13	1	↓77
CARAGA	0	0	8	0	↓100
NCR	14	1	31	0	↓55

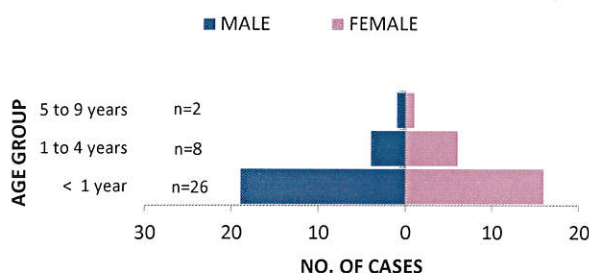


Profile of Cases

A. Cases

There were **24 males (51%)** and **23 females (49%)** among the reported pertussis cases. Age of cases ranged from **1 month to 7 years old** (median age of 5 months). Age groups with most number of cases were **below 1 year old** with (35 or 74%) followed by 1 – 4 years old with (10 or 21%) (Figure 19).

Figure 20. Pertussis Cases by Age Group and Sex, Philippines, January 1 to April 27, 2019 (N=47)



Vaccination status showed that **(9 or 19%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. 21 (45%) did not receive a dose of the DPT/Pentavalent vaccine. Seven (15%) have unknown dose received and Seven (15%) received only 1 dose. (Figure 20).

Figure 21. Reported Pertussis Cases by DPT Dose Received, Philippines, January 1 to April 27, 2019 (N=47)

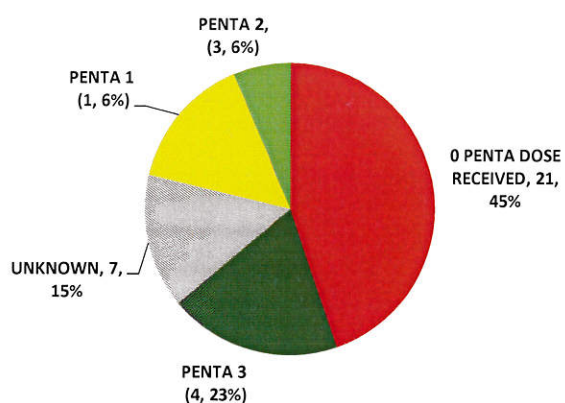
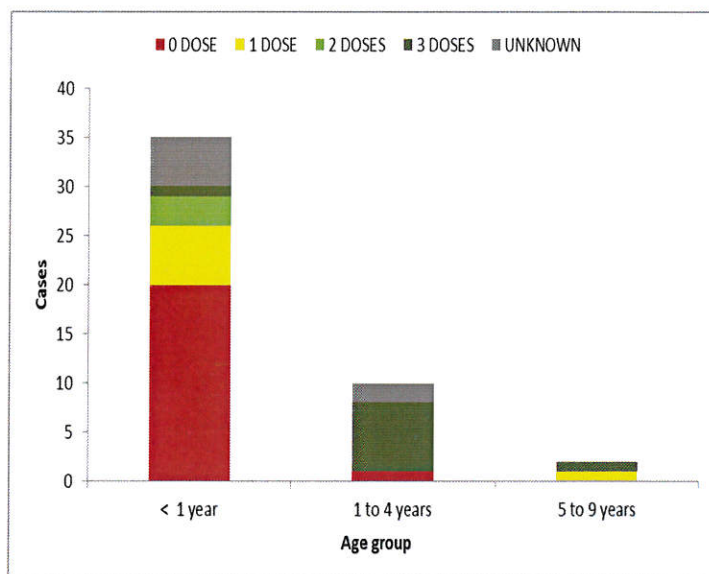


Figure 22. Reported Pertussis Cases by Age Group and DPT Dose Received, Philippines, January 1 to April 27, 2019 (N=47)



B. Deaths

There were **three (3)** deaths (CFR=6%) among the 47 reported pertussis cases. Ages: 1 month – 2 months old (median: 2 months)

Vaccination status showed that 3 (100%) of the reported deaths did not received the DPT/Pentavalent vaccine.

C. Confirmed Cases

Three (3) **males** and Four (4) **females** were laboratory confirmed pertussis cases. Age ranges from 1 month – 4 years old (median 2 years old). Four (57%) of the confirmed cases **were not vaccinated** and **(2, 29%) received 3 doses of DPT/Pentavalent vaccine**.

D. Profile of a Confirmed Pertussis death

There was one (1) death among seven (7) confirmed pertussis cases. Age of death was 2 months old.

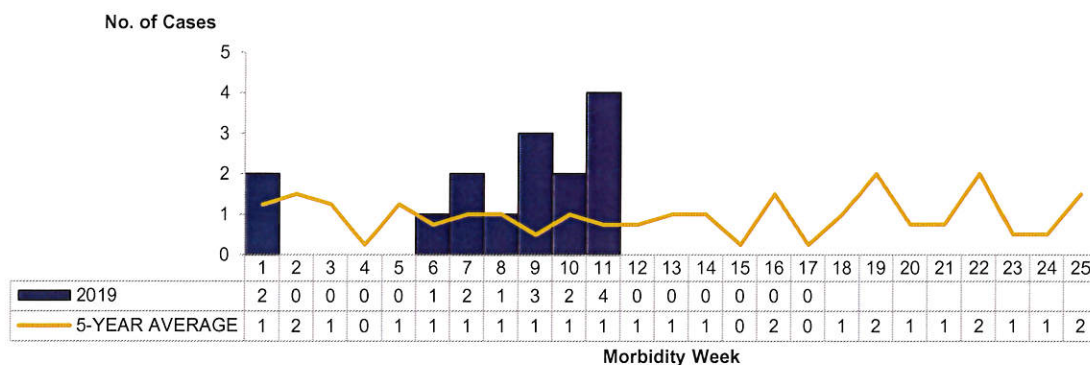


IV. NEONATAL TETANUS

Trend in the Philippines

A total of **15** clinically confirmed neonatal tetanus (NT) cases were reported nationwide from January 1 – April 27, 2019. The distribution of neonatal tetanus cases for 2019 compared to the 5-year average of cases from 2014 to 2019 is shown below (Figure 21).

Figure 23. Neonatal Tetanus Cases by Morbidity Week, Philippines, January 1 to April 27, 2019 (N=15)



Geographic Distribution

There has been no change of reported neonatal tetanus cases from 14 cases in 2018 to 14 cases in 2019, same time period. Most reported cases were from **ARMM** and **MIMAROPA** with four (4) cases each, while Region XII have three (3) cases (Table 7). All regions have maintained the <1/1000 livebirths NT rate under Maternal and Neonatal Tetanus Elimination standards.

Table 7. Neonatal Tetanus Cases by Region, Philippines, January 1 to April 27, 2019 (N=4) vs. January 1 to April 27, 2018

REGION	2019			2018		
	Cases for MW 17	Annualize NT Rate >1/1000 LB	Deaths	Cases for MW 17	Annualize NT Rate >1/1000 LB	Deaths
PHL	15	0.007	7	19	0.007	11
I	0	0.000	0	0	0.000	0
II	0	0.000	0	1	0.010	0
III	0	0.000	0	1	0.003	1
IVA	1	0.003	0	0	0.000	0
MIMAROPA	5	0.071	1	0	0.000	0
V	0	0.000	0	0	0.000	0
VI	2	0.013	2	0	0.000	0
VII	0	0.000	0	0	0.000	0
VIII	0	0.000	0	2	0.016	1
IX	0	0.000	0	3	0.030	2
X	0	0.000	0	0	0.000	0
XI	0	0.000	0	0	0.000	0
XII	3	0.027	3	3	0.023	1
ARMM	4	0.041	1	8	0.072	6
CAR	0	0.000	0	0	0.000	0
CARAGA	0	0.000	0	0	0.000	0
NCR	0	0.000	0	1	0.003	0

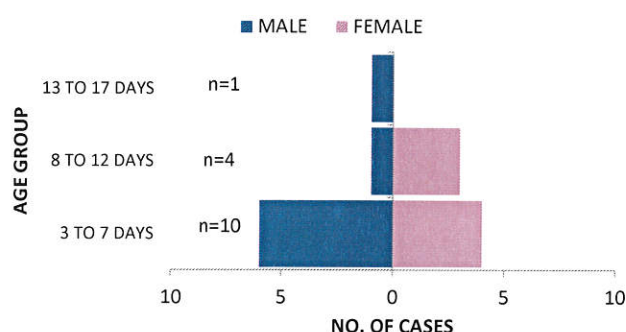


Profile of Cases

A. Age group and Sex

Among the clinically-confirmed NT cases, Eight (53%) **male** and seven (47%) **female**. Age of cases ranges from 4 – 15 days old (median age of 7 days old). (Figure 23).

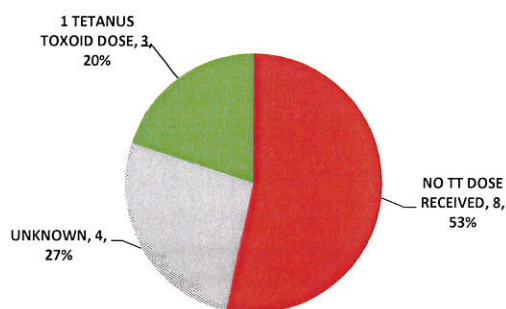
Figure 24. Clinically Confirmed Neonatal Tetanus Cases by Age Group and Sex, Philippines, January 1 to April 27, 2019 (N=15)



B. Vaccination Status

Eight (53%) of the mothers of clinically confirmed cases **did not receive any dose of the tetanus toxoid vaccine**, followed with unknown vaccination status (4 or 27%) and 3 or 20%) received one dose of tetanus toxoid. (Figure 24).

Figure 25. Clinically Confirmed Neonatal Tetanus Cases by Vaccination Status, Philippines, January 1 to April 27, 2019 (N=15)



C. Delivery Practices among Clinically Confirmed Neonatal Tetanus Cases

In terms of delivery practices, 14 (100%) of the neonatal tetanus cases were delivered at home. Five (36%) of the cases were attended by a traditional birth attendant, (4 or 29%) by a hilot, 2 (14%) by a lay-person, and 3 (21%) unknown. Seven (50%) had blade, (6 or 42%) bamboo and (1, 7%) scissors used as the common cord cutting tool. Umbilical stump treatment of the NT case was alcohol 5 (36%) while (4 or 29%) used other materials and (5 or 36%) was unknown (Table 8).

Table 8. Delivery Practices of Clinically Confirmed Neonatal Tetanus Cases, Philippines, January 1 to April 27, 2019 (N=15)

Delivery Practices	No. of Cases	Percentage
Place of Delivery		
Home	15	100%
Delivery Attendant		
TBA	5	33%
Hilot	4	27%
Lay-person	3	20%
Unknown	3	20%
Cord Cut Tool Used		
Blade	7	47%
Bamboo	6	40%
Scissors	2	13%
Stump Treatment Used		
Alcohol	5	33%
Others*	4	27%
Unknown	6	40%

*Other stump treatment material include hot water and powdered coconut shell

Profile of Neonatal Tetanus Deaths

There were Seven (7) deaths (CFR=47%) among the 15 neonatal tetanus cases. Ages of deaths ranges from 5 – 7 days old. Mother of reported deaths (4, 57%) had unknown vaccination status and (3 or 43%) did not received any dose of Tetanus Toxoid.



D. Neonatal Tetanus Surveillance Indicators by Regions

The Philippines has a reporting rate of 40% which is still below the target of $\geq 80\%$. Consequently, none of the regions achieved the target as well. This is contrary to the NT Investigation rate which the Philippines and all regions with reported cases achieved 100% performance. (Table 9)

Table 9. Neonatal Tetanus Surveillance Indicators by Region
Philippines, January 1 to April 27, 2019 (N=15)

REGION	Clinically Confirmed Neonatal Tetanus Cases		
	NT Rate(1<(1,000LB)	TIMELINESS OF REPORTING	TIMELINESS OF INVESTIGATION
PHL	0.005	40%	100%
I	0.000		
II	0.000		
III	0.000		
IVA	0.002	0%	100.00%
MIMAROPA	0.048	25%	100.00%
V	0.000		
VI	0.010	50%	100.00%
VII	0.000		
VIII	0.000		
IX	0.000		
X	0.000		
XI	0.000		
XII	0.023	67%	100.00%
ARMM	0.036	50%	100.00%
CAR	0.000		
CARAGA	0.000		
NCR	0.000		

LEGEND:	<1/1,000 LB	<80%	$\geq 80\%$
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Neonatal Tetanus Elimination in the Philippines

NT elimination is defined as the achievement of <1 NT case per 1,000 live births (LB) in every province/city of every country. This is operationally defined by an algorithm assessing four major indicators: reported incident of NT, the reliability of NT surveillance (quality NT surveillance indicators), the proportion of women with at least two doses of tetanus toxoid (TT2+) and the estimated clean delivery rate.

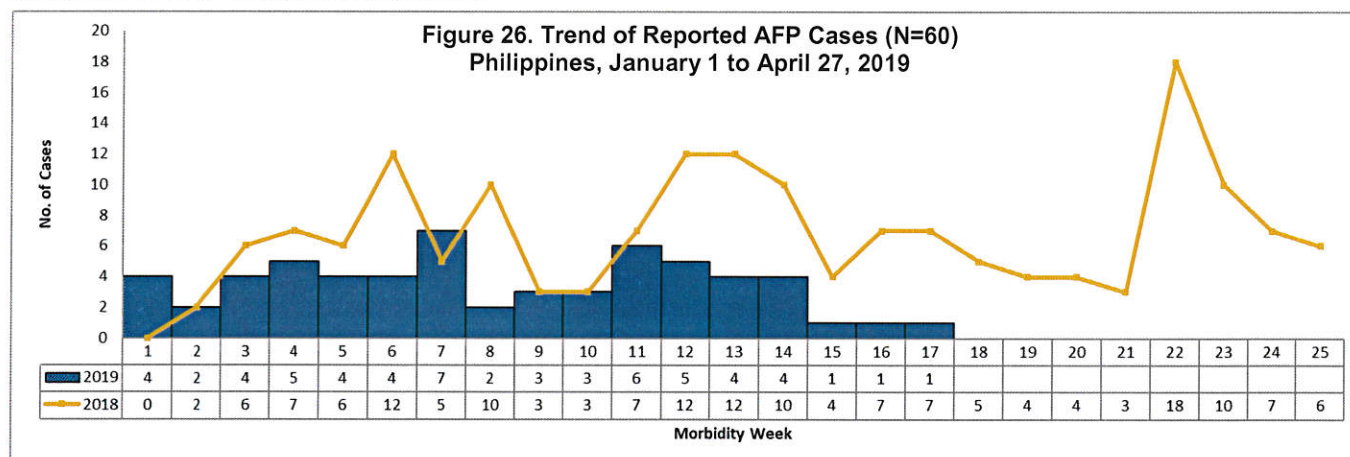


V. ACUTE FLACCID PARALYSIS

AFP surveillance is an essential strategy which aims to look for poliovirus circulation in the community by investigating all possible polio cases. Its role is to identify high risk areas or groups and certify that the Philippines is still polio-free.

Trend in the Philippines

A total of **60 AFP** cases were reported nationwide from January 1 to April 27, 2019. The distribution of AFP cases for 2019 compared to 2018 is shown below (Figure 25).



Geographic Distribution

A total of 60 AFP cases were reported from January to April 27, 2019. Among the 60 reported AFP cases, 12 (20%) were discarded as non-polio AFP, while 45 (75%) are still pending for 60-day follow-up, expert panel review and for official laboratory result. There were 3 (5%) reported cases that did not fit the case definition and were classified as *not AFP* (Table 9).

Table 10. Reported AFP Cases by Region and Classification
January 1 to April 27, 2019

REGION	2019 Target AFP Cases 2/100k	2019 Target AFP Cases 1/100k	Reported Cases	Classification			Total Number of Classified Cases
				Non-Polio (Discarded)	NOT AFP	Pending	
PHL	688	344	60	12	3	45	15
I	32	16	3	1	0	2	1
II	22	11	0	0	0	0	0
III	72	36	2	0	0	2	0
IVA	96	48	7	2	0	5	2
MIMAROPA	22	11	0	0	0	0	0
V	44	22	3	0	0	3	0
VI	48	24	9	2	0	7	2
VII	51	25	2	0	0	2	0
VIII	32	16	7	2	0	4	2
IX	27	13	4	2	0	2	2
X	34	17	2	0	0	2	0
XI	34	17	4	2	1	2	3
XII	34	17	5	0	0	5	0
ARMM	36	18	2	0	0	2	0
CAR	11	6	3	1	0	2	1
CARAGA	19	9	0	0	0	0	0
NCR	74	38	7	0	2	5	2

Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases. All 2019 data reflects partial data only of all regions.

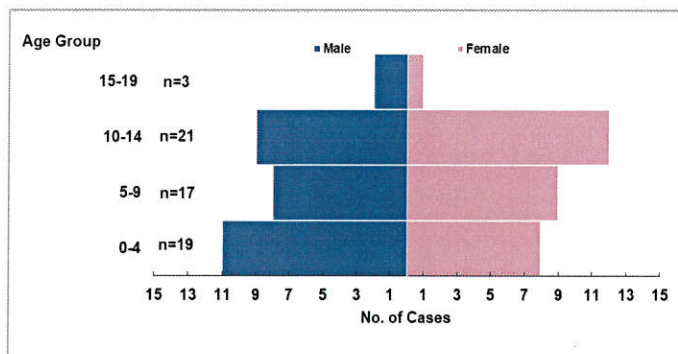


Profile of Cases

A. Age group and Sex

Thirty (50%) are males while 30 (50%) are females. Age ranges from 3 months to 16 years (median age of 8 years old). Twenty-one (35%) of the AFP cases reported belong to 10-14 age group (Figure 26).

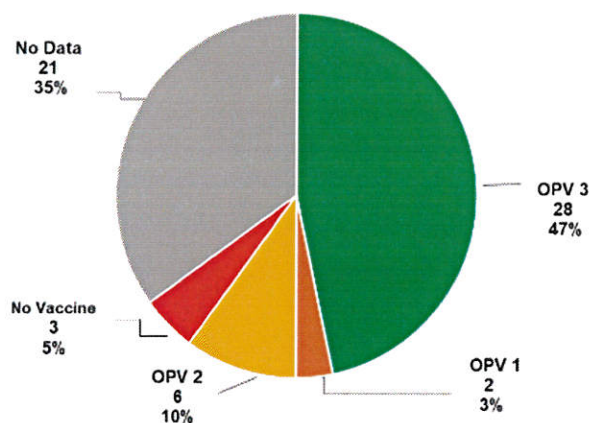
Figure 27. AFP Cases by Sex and Age Group (N=60)
Philippines, January 1 to April 27, 2019



B. Vaccination Status

Among the 60 reported AFP cases, 28 (47%) completed 3 doses of OPV, 6 (10%) had OPV 2 and 2 (3%) had OPV 1. Twenty-one (35%) had no data (Figure 27).

Figure 28. Vaccination Status of AFP Cases (N=60)
Philippines, January 1 to April 27, 2019



C. Laboratory Status

There were no isolated wild or vaccine-derived poliovirus from January 1 to April 27. Stool 1 was collected in 56 (93%) AFP cases and stool 2 in 54 (90%) of AFP cases. Two cases had poliovirus Sabin-like type 3 isolated (Table 10).

Table 11. Laboratory Status of Reported AFP Cases (N=60)
Philippines, January 1 to April 27, 2019

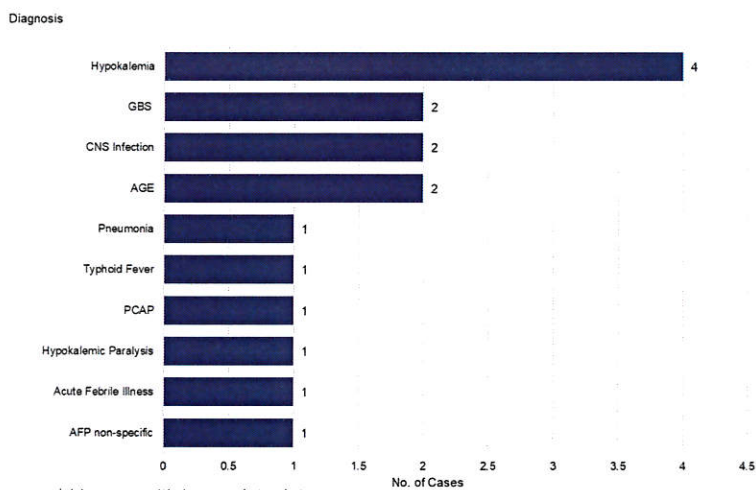
Stool Specimen Result	Stool Specimen 1		Stool Specimen 2	
Total	56	93%	54	90%
Negative for poliovirus	13	23%	12	22%
Others				
Poliovirus (Sabin-Like)*	2	4%	2	4%
Non-polio enterovirus (NPEV)	1	2%	2	4%
Pending Lab Results	40	71%	38	70%

* PV Sabin like type 1,3 and Sabin like type 3

D. Differential Diagnosis

The top diagnosis among AFP cases reported were Hypokalemia (4 or 7%). However, there are 44 (73%) cases with incomplete data. (Figure 29)

Figure 29. AFP Cases by Differential Diagnosis (n=16)
Philippines, January 1 to April 27, 2019



*44 cases with incomplete data



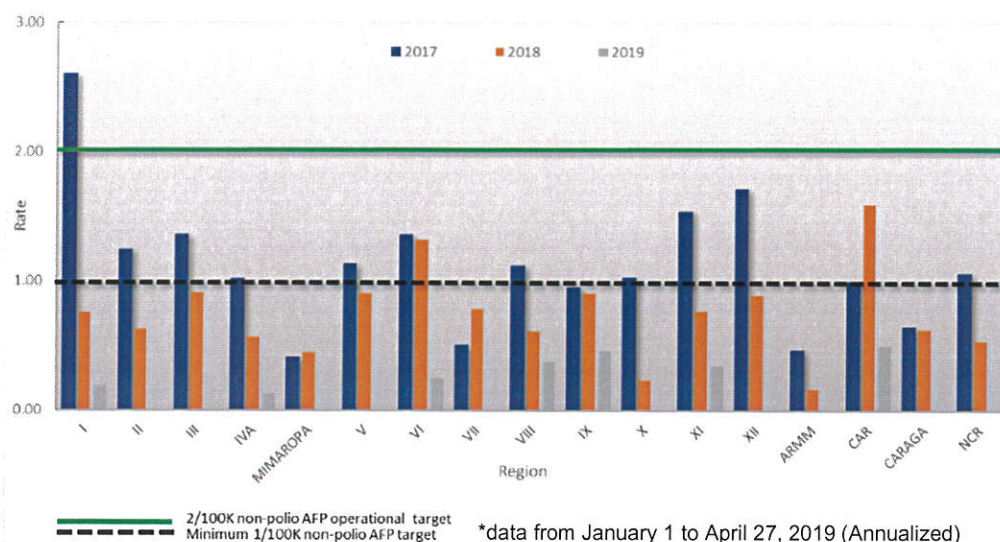
SURVEILLANCE PERFORMANCE INDICATORS – AFP REPORTING RATE AND NON – POLIO AFP RATE

From January 1 to April 27, 2019, there were **60** AFP cases reported, providing the Philippines an annualized reporting rate of **0.50 / 100,000** population of children under 15 years old. Three (3) Regions were able to reach and surpass the target. The incidence of AFP (non-polio AFP rate) caused by diseases other than poliomyelitis is **0.10 / 100,000** population of children under 15 years age. One (1) region have nearly reached the target. (Figure 30 & Table 11)

TABLE 12. REPORTING AND NON-POLIO AFP RATE AS OF MW 1-17

REGION	Annualized Reporting Rate	Annualized Non-Polio AFP Rate
PHL	0.50	0.10
I	0.56	0.19
II	0.00	0.00
III	0.17	0.00
IVA	0.44	0.13
MIMAROPA	0.00	0.00
V	0.41	0.00
VI	1.13	0.25
VII	0.24	0.00
VIII	1.13	0.38
IX	0.92	0.46
X	0.35	0.00
XI	0.71	0.35
XII	0.88	0.00
ARMM	0.33	0.00
CAR	1.50	0.50
CARAGA	0.00	0.00
NCR	0.39	0.00

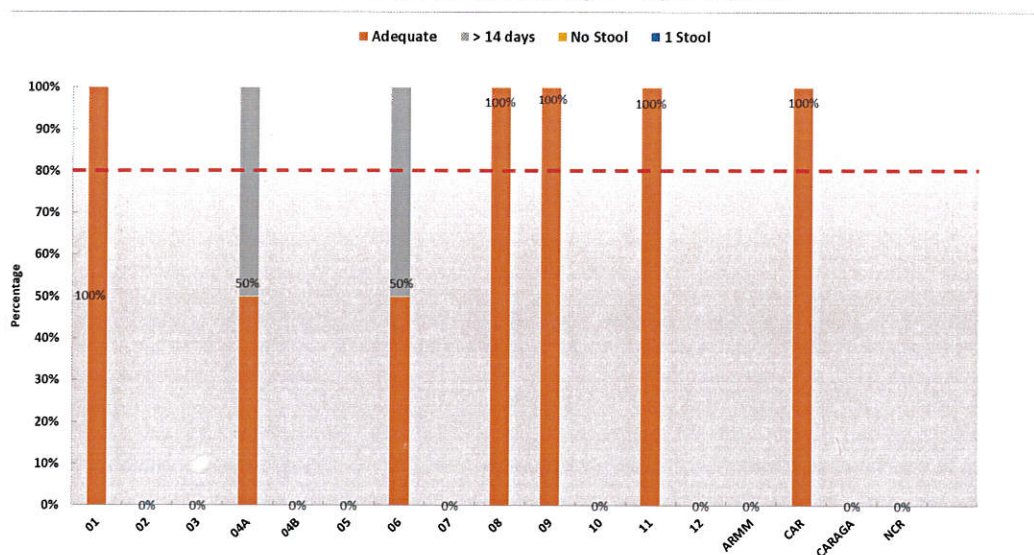
Figure 30. THREE-YEAR COMPARISON OF NON-POLIO AFP RATE BY REGION, PHILIPPINES, 2017-2019*



SURVEILLANCE PERFORMANCE INDICATORS – STOOL SPECIMEN ADEQUACY RATE

All AFP cases should have full clinical and virological investigation with at least 80% of AFP cases having adequate stool specimens collected. Among the **12 non-polio** AFP cases, **10 (83%) cases** have 2 stool specimens collected within 14 days from the onset which gives us an adequacy rate of **83%** (Table 12). A portion, **2 cases or 17%** had 2 stool specimen collected beyond the required collection period. Among the 17 Regions, **5 Regions** have reached or surpassed the target rate of 80%.

Figure 31. STOOL SPECIMEN ADEQUACY RATE BY REGION, PHILIPPINES, January 1 – April 27, 2019



*not AFP and pending cases are excluded in the analysis

TABLE 13. STOOL SPECIMEN ADEQUACY RATE OF MW 1-17

Region	Stool Specimen Adequacy Rate
I	-
II	-
III	-
IVA	50
IVB	-
V	-
VI	50
VII	-
VIII	100
IX	100
X	-
XI	100
XII	-
ARMM	-
CAR	100
CARAGA	-
NCR	-
PHL	83

Legend:

Reached or surpassed target
Nearly reached target
Substantially below target

Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases. All 2018 data reflects partial data only of all regions.

A PDF file of this report is available at www.doh.gov.ph/statistics.



ANNEX A. CLUSTER OF DIPHTHERIA CASES

MORBIDITY WEEK	REGION	PROVINCE	MUNCITY	BARANGAY	CASES	
					CONFIRMED	SUSPECT
5-7	III	BULACAN	BOCAUE	ANTIPONA	0	2

CLUSTER OF PERTUSSIS CASES

MORBIDITY WEEK	REGION	PROVINCE	MUNCITY	BARANGAY	CASES	
					CONFIRMED	SUSPECT
5-6	XI	DAVAO DEL SUR	DAVAO CITY	LEON GARCIA SR.	1	2
6-8	CAR	BENGUET	BAGUIO	BAKAKENG CENTRAL	1	2