



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 August 31, 2019 or Morbidity Weeks 1 -35 (Table 1).

Table 1. Summary of Reported Vaccine Preventable Diseases,
Philippines, January 1 – August 31, 2019

Vaccine Preventable Diseases	Total No of Cases	Confirmed Cases		
		Cases	Deaths	CFR %
Measles	42,112	-	-	-
Rubella		106	0	0
Diphtheria	161	10	5	50
Pertussis	107	15	1	7
Neonatal Tetanus	41	41	21	51
Polio (AFP Surveillance)	204	-	-	-

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.
Note: Persons with positive <i>Corynebacterium diphtheriae</i> cultures who do not meet the clinical description (i.e. asymptomatic carriers) should not be reported as probable or confirmed diphtheria cases.	
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	- A case of acute cough illness of any duration with a positive culture for <i>B. pertussis</i> ; 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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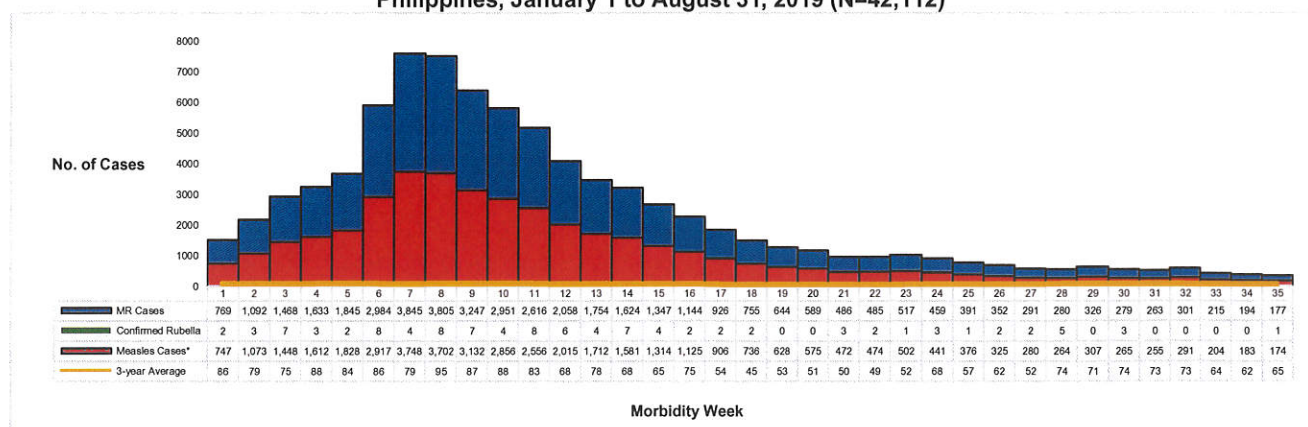
I. MEASLES-RUBELLA

Suspect Cases

Trend in the Philippines

There are 1,150 Measles-Rubella cases reported to PIDSR for the month of August 2019 or morbidity weeks 31 to 35. This brings to a cumulative total of 42,112 from January 1 to August 31, 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 August 31, 2019 (N=42,112)



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

Geographic Distribution

From January 1 to August 2019, 2019 or morbidity weeks 1 to 35, cases are 187% higher than the number of cases reported during the same time period last year (14,659). Most of the reported cases were from the following regions: IV-A CALABARZON (7,546 or 18%), NCR (7,191 or 17%), Region III (6,592 or 16%), Region VI (2,677 or 6%), and Region X (2,253 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 August 31, 2019 (N=42,112) vs. January 1 to August 31, 2018

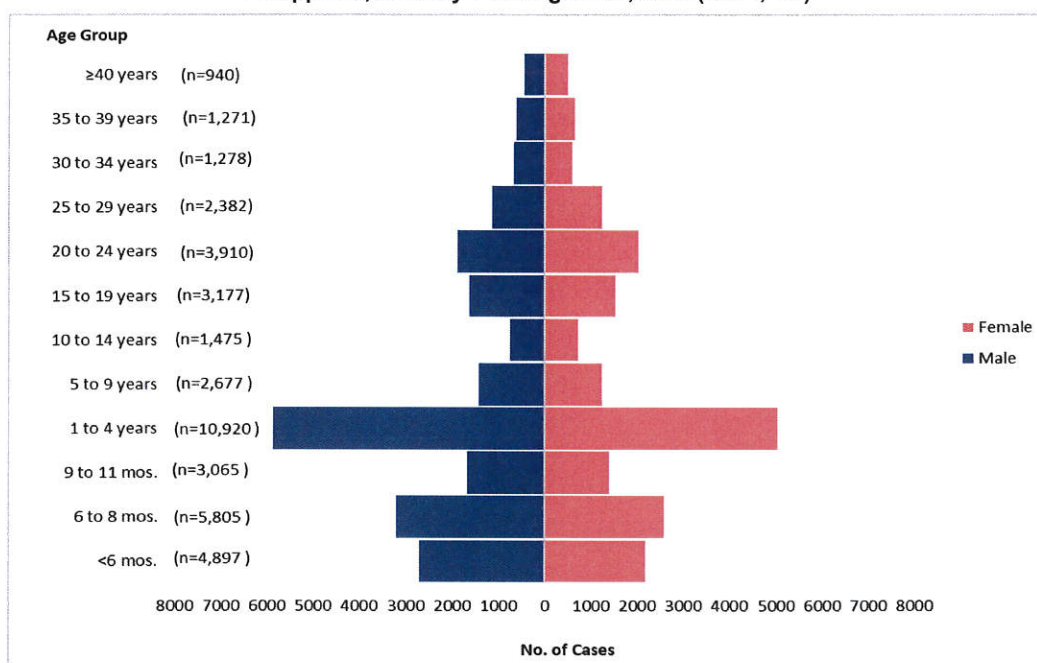
Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	42,112	558	14,659	120	↑ 187
I	1,885	22	343	0	↑ 450
II	640	3	67	0	↑ 855
III	6,592	118	565	8	↑ 1,067
IV-A CALABARZON	7,546	124	1,019	8	↑ 641
IV-B MIMAROPA	1,905	23	53	0	↑ 3,494
V	1,281	12	214	5	↑ 499
VI	2,677	9	303	0	↑ 783
VII	2,118	16	282	1	↑ 651
VIII	1,821	41	123	4	↑ 1,380
IX	603	2	1,294	7	↓ 53
X	2,253	16	1,314	2	↑ 71
XI	1,282	15	1,424	16	↓ 10
XII	858	6	1,431	11	↓ 40
BARMM	886	8	3,815	28	↓ 77
CAR	823	3	96	0	↑ 757
Caraga	1,751	23	276	2	↑ 534
NCR	7,191	117	2,040	28	↑ 253



Profile of Reported Cases

Majority (22,200 or 53%) of the reported cases are males. 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 (10,920 or 26%), 6 to 8 months old (5,805 or 14%) and less than 6 months old (4,897 or 12%) (Figure 2).

Figure 2. Reported Measles-Rubella Cases by Age Group and Sex, Philippines, January 1 to August 31, 2019 (N=42,112)*



*315 cases with unspecified age

Majority (24,341 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 August 31, 2019 (N=42,112)

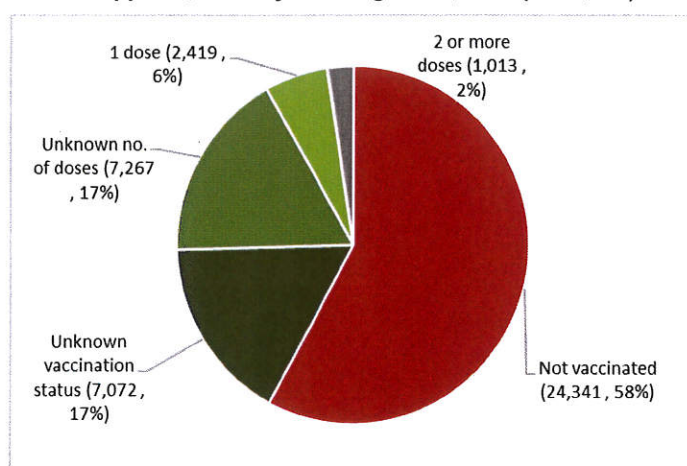
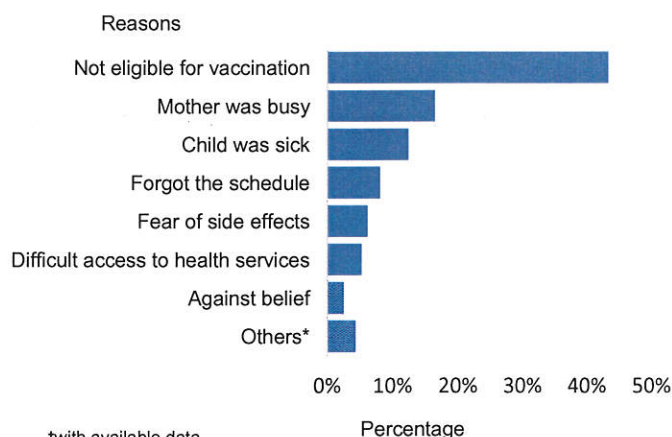


Figure 4. Reasons for Non-vaccination of Measles Vaccine*, Philippines, January 1 to August 31, 2019



*with available data

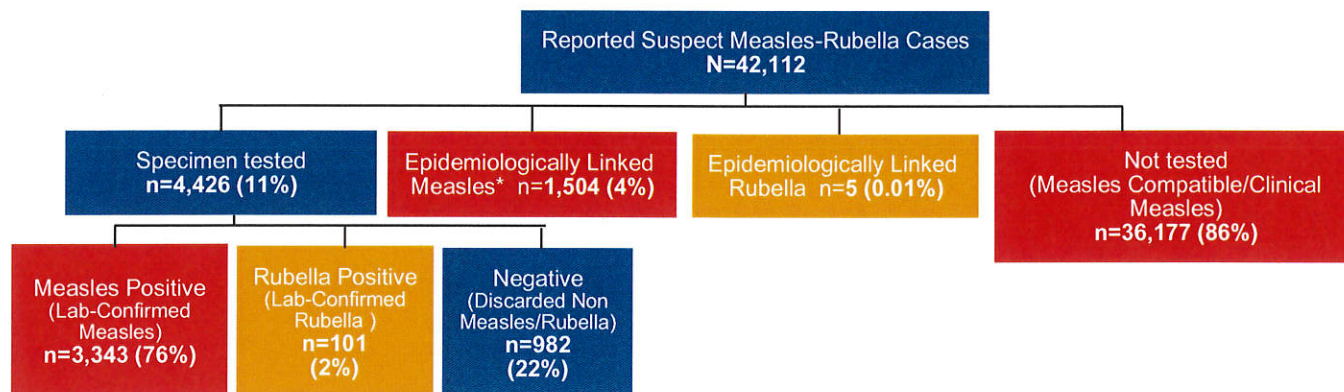
*other reasons: moves residence, lack of knowledge, history of travel, medical contraindication, refused vaccination, flood during immunization, received other vaccine, pregnant, mother was sick, lost vaccination card, child not available, card was left, laziness, with disaster



Case Classification

Among the 42,112, reported cases, a total of 4,426 (11%) cases were tested for measles/rubella IgM and/or PCR. Among the tested cases, 3,343 (76%) were positive for measles and 101 (2%) were positive for rubella. One thousand five hundred four (1,504 or 4%) 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 August 31, 2019 (N=42,112)



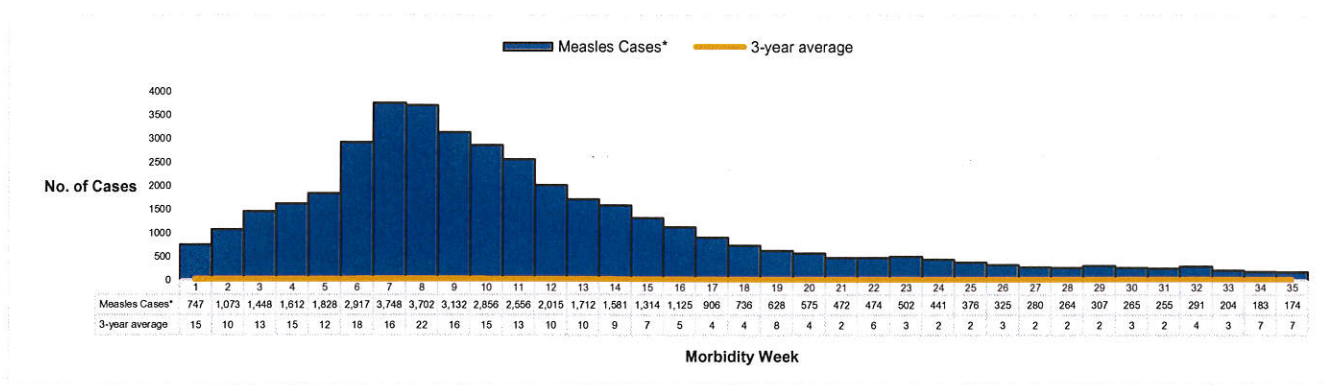
Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, and measles compatible (n=41,024)

Measles Cases

Trend in the Philippines

There are 1, 107 measles cases reported to PIDSR for the month of August 2019 or morbidity weeks 31 to 35. This brings to a cumulative total of 41,024 from January 1 to August 31, 2019 with 552 deaths (CFR=1.3%) reported. 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 August 31, 2019 (n=41,024)



* Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, and measles compatible (n=41,024)



Geographic Distribution

Most of the measles cases were from the following regions: Region IV-A CALABARZON (7,475 or 18%), NCR (7,133 or 17%), Region III (6,469 or 16%), Region VI (2,470 or 6%) and Region X (2,224 or 5%). Measles cases in 2019 increased by 196% 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 (3,352 or 8%), Bulacan (1,849 or 5%), Pampanga (1,646 or 4%), Cebu (1,367 or 3%), Laguna (1,357 or 3%),

Top 5 municipalities with measles cases include: Quezon City (2,072 or 5%), Manila (1,325 or 3%), Antipolo City (1,234 or 3%), Caloocan City (787 or 2%) and Cebu City (525 or 1%).

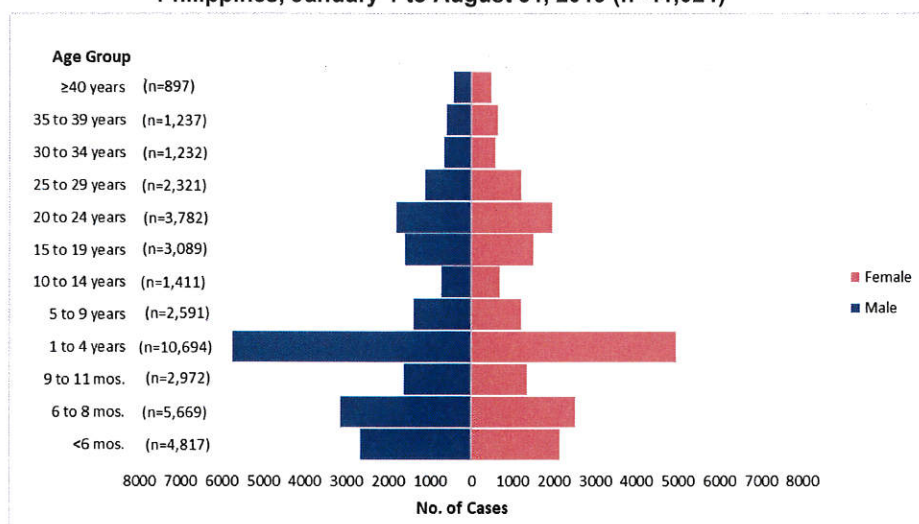
**Table 2. Measles Cases by Region,
Philippines, January 1 to August 31, 2019 (n=41,024) vs. January 1 to August 31, 2018**

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	41,024	552	13,847	117	↑ 196
I	1725	22	271	0	↑ 537
II	611	3	47	0	↑ 1,200
III	6469	116	490	8	↑ 1,220
IV-A CALABARZON	7475	123	941	7	↑ 694
IV-B MIMAROPA	1899	23	44	0	↑ 4,216
V	1249	12	187	5	↑ 568
VI	2470	9	224	0	↑ 1,003
VII	2024	14	239	1	↑ 747
VIII	1802	41	115	4	↑ 1,467
IX	581	2	1262	6	↓ 54
X	2224	16	1275	2	↑ 74
XI	1217	15	1336	16	↓ 9
XII	809	6	1364	11	↓ 41
BARMM	879	8	3802	28	↓ 77
CAR	726	3	68	0	↑ 968
Caraga	1731	23	237	2	↑ 630
NCR	7133	116	1945	27	↑ 267

Profile of Measles Cases

Majority (21,640, 53%) of the measles cases are males. 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 (10,694 or 26%), 6-8 months old (5,669 or 14%), and less than 6 months old (4,817, 12%) (Figure 7).

**Figure 7. Measles Cases by Age Group and Sex,
Philippines, January 1 to August 31, 2019 (n=41,024)***



*312 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 (23,916 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 August 31, 2019 (n=41,024)

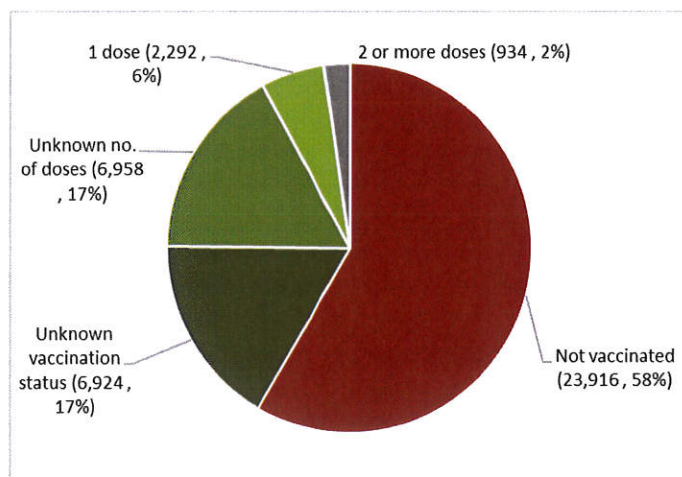
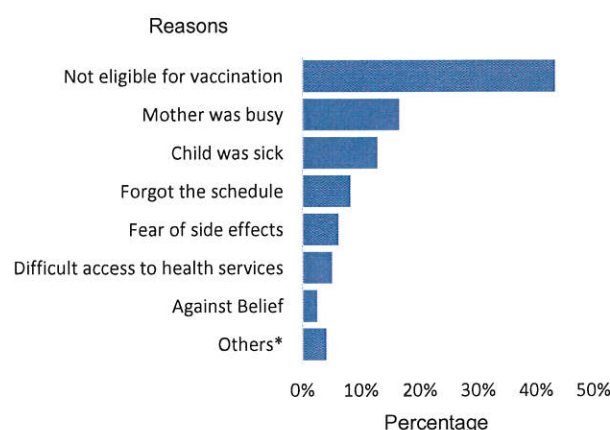


Figure 9. Reasons for Non-vaccination of Measles Vaccine among Measles Cases*, Philippines, January 1 to August 31, 2019



*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

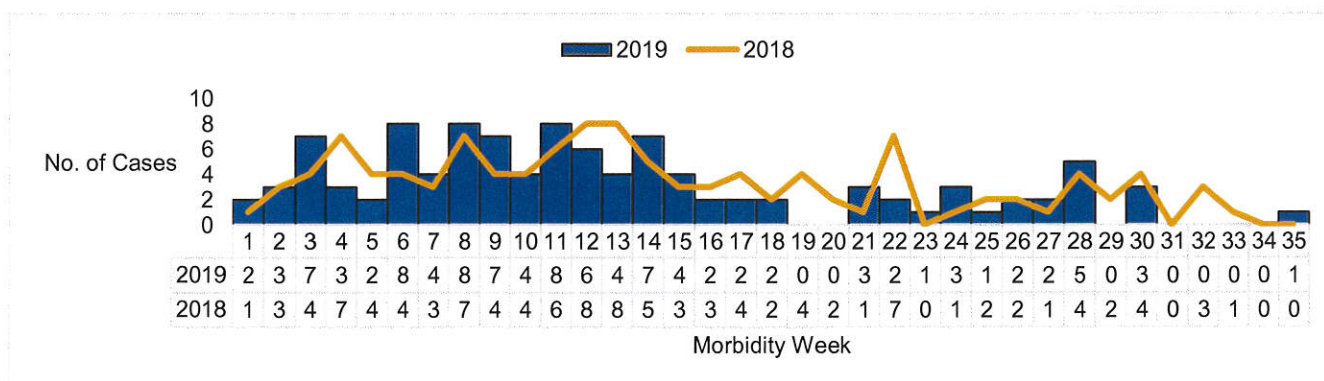
There were 552 deaths (CFR=1.3%) out of the 41,024 measles cases. Ages of deaths ranged from **less than 1 month – 59 years old** (median of 1 year). Most affected age groups with highest number of deaths were: 1-4 years (223 or 40%), less than 6 months (117 or 21%), and 6-8 months (108, 20%). Majority (432 or 78%) of deaths were not vaccinated.

Confirmed Rubella Cases

Trend in the Philippines

There were 106 confirmed rubella cases from January 1 to August 31, 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=106)





Geographic Distribution

There were 106 reported confirmed rubella cases in all regions except for regions MIMAROPA and BARMM. This is 7% lower compared to the same time period in 2018 (114). However, Regions II, III, V, VI, VIII, and CAR showed increase in the number of confirmed rubella cases compared to 2018. No death was reported (Table 3).

Table 3. Confirmed Rubella Cases by Region, Philippines, January 1 to August 31, 2019 (n=106) vs. January 1 to August 31, 2018

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	106	0	114	0	↓ 7
I	7	0	9	0	↓ 22
II	4	0	2	0	↑ 100
III	16	0	7	0	↑ 129
IV-A CALABARZON	13	0	14	0	↓ 7
IV-B MIMAROPA	0	0	2	0	↓ 100
V	3	0	1	0	↑ 200
VI	25	0	6	0	↑ 317
VII	6	0	7	0	↓ 14
VIII	3	0	1	0	↑ 200
IX	2	0	4	0	↓ 50
X	4	0	5	0	↓ 20
XI	10	0	22	0	↓ 55
XII	1	0	13	0	↓ 92
BARMM	0	0	3	0	↓ 100
CAR	5	0	2	0	↑ 150
Caraga	2	0	6	0	↓ 67
NCR	5	0	10	0	↓ 50

Profile of Rubella Case

Majority (59 or 56%) of confirmed rubella cases are females. Age of cases ranged from 7 months to 55 years old (median of 17 years). The most affected age group was and 20 to 24 years (23 or 22%) (Figure 11).

Thirty four (32%) of the confirmed rubella cases were vaccinated but with unknown number of doses. Only 6 (6%) cases were 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 August 31, 2019 (n=106)

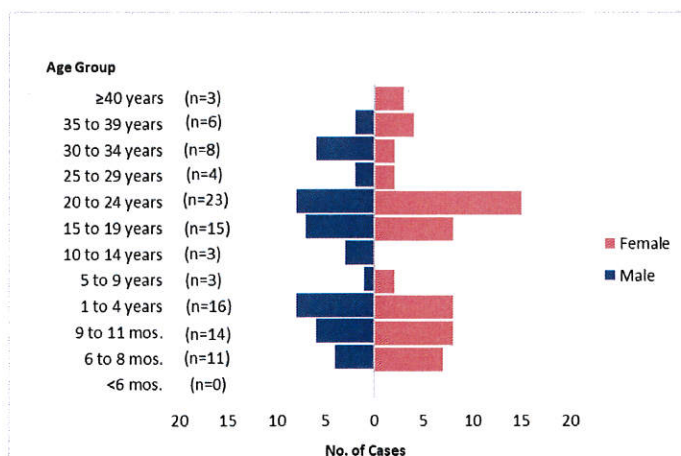
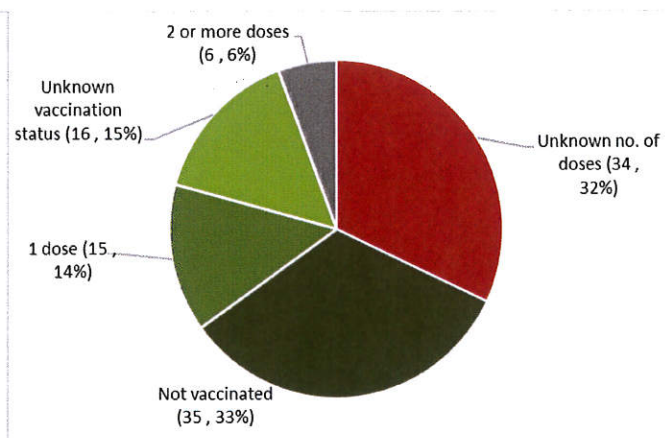


Figure 12. Vaccination Status of Confirmed Rubella Cases, Philippines, January 1 to August 31, 2019 (n=106)





Measles Surveillance Performance Indicators

Table 4 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 I, VI, and CAR have met the target on annualized non-measles/non-rubella reporting rate. Suspect measles reporting target of 2 per 100,000 population was achieved due to the increased number of cases reported.

Table 4. Measles Surveillance Performance Indicators by Region, Philippines, January 1 to August 31, 2019 vs. January 1 to August 31, 2018

REGION	ANNUALIZED MEASLES INCIDENCE RATE		TIMELINESS & ADEQUACY OF BLOOD		TIMELINESS & ADEQUACY OF CASE INVESTIGATION		ANNUALIZED SUSPECT MEASLES REPORTING RATE		ANNUALIZED NON-MEASLES/ NON-RUBELLA REPORTING		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	10.12	94.40	74	62	31	28	9.92	53.92	1.82	4.38	69	74
II	2.51	44.25	85	70	18	18	2.81	26.47	0.75	1.03	61	79
III	20.35	54.05	88	64	68	34	7.14	81.72	0.86	1.33	58	92
IV-A CALABARZON	20.86	53.46	52	31	21	15	9.84	71.02	0.62	0.55	71	92
IV-B MIMAROPA	2.91	48.26	49	8	28	3	2.57	91.03	0.34	0.29	72	94
V	28.42	34.21	83	30	26	14	5.33	31.53	0.65	0.71	34	87
VI	18.30	72.36	94	73	32	33	5.84	50.98	1.41	3.47	43	78
VII	25.73	68.73	93	60	41	16	5.46	40.32	0.70	1.68	38	79
VIII	6.79	19.74	50	20	11	10	3.98	57.98	0.23	0.51	76	96
IX	130.86	22.07	67	42	33	23	51.63	23.77	1.12	0.79	72	87
X	79.84	93.81	76	45	45	25	40.04	67.52	1.04	0.75	77	85
XI	114.53	128.31	73	65	33	31	41.50	36.72	1.92	1.58	66	60
XII	126.07	52.96	88	62	45	33	44.66	26.26	1.69	1.47	67	74
BARMM	223.93	23.74	33	23	15	9	139.13	31.39	0.36	0.25	84	92
CAR	12.61	154.50	81	71	40	15	8.07	68.36	2.19	7.64	55	66
Caraga	43.41	47.81	70	21	17	7	15.36	96.22	1.84	0.99	58	94
NCR	78.55	113.15	61	26	24	6	22.70	78.76	0.95	0.58	61	85
Philippines	50.68	67.31	62	43	29	18	20.71	58.48	0.99	1.36	70	86
LEGEND:	<1	≥1	≥80%	<80%	≥80%	<80%	≥2/100,000 Pop.	<2/100,000 Pop.	≥2/100,000 Pop.	<2/100,000 Pop.	<10%	≤50%
												>50%

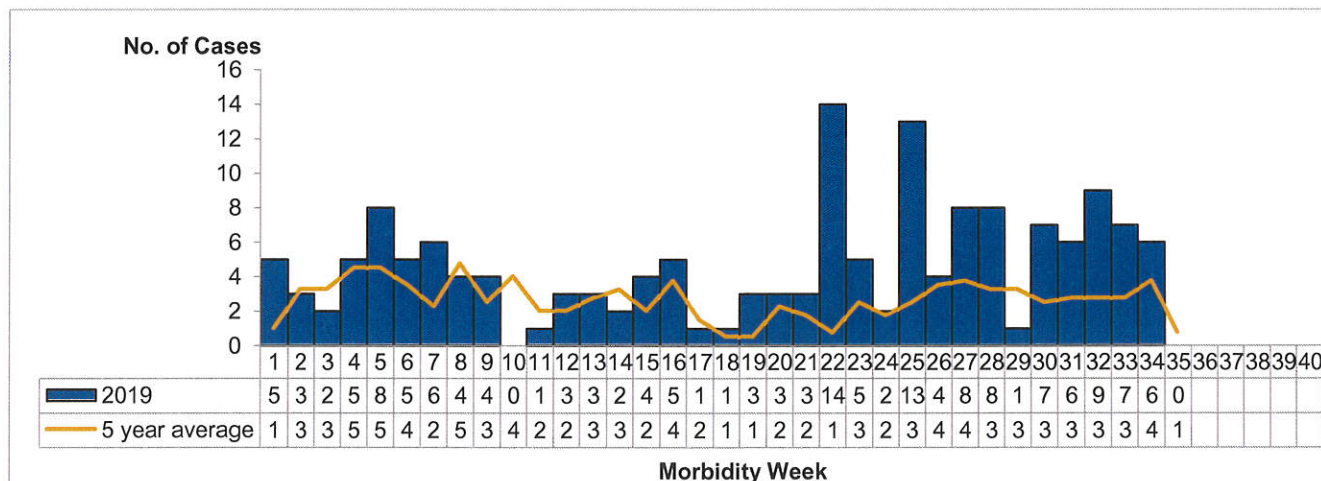


II. DIPHTHERIA

Trend in the Philippines

A total of **161** diphtheria cases were reported nationwide from January 1 – August, 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 - 35 (January 1 – August 31, 2019) vs Epidemic and Alert Thresholds Reported Diphtheria Cases (N=161)



Geographic Distribution

There has been a thirty-six (36%) increase of diphtheria cases from 2018 (N=118) and 2019 (N=161), same time period. Majority of reported diphtheria cases came from NCR (44 or 27%) followed by CAR with (26 or 15%) cases. Region with the **highest increase in the percent change** was CAR with 2500% increase (Table 5). Ten (16%) were laboratory confirmed out of 60 cases tested. Nine (9) clusters were identified as of August 31, 2019. A cluster is defined as two or more diphtheria cases from the same barangay reported within four consecutive weeks (Annex A).

Top 3 provinces with diphtheria cases include: Metro Manila (44 or 27%), Ifugao (23 or 14%), and Zamboanga del Sur with (9 or 6%) cases.

Table 5. Reported Diphtheria Cases by Region, Philippines, January 1 to August 31, 2019 (N=126) vs. January 1 to August 31, 2018

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	161	40	118	30	↑36
I	5	1	1	1	↑400
II	1	1	0	0	-
III	15	1	16	4	↓6
IVA- CALABARZON	24	1	22	4	↑9
IV-B MIMAROPA	1	1	0	0	-
V	7	3	7	4	0
VI	5	1	2	0	↑150
VII	0	0	2	0	↓100
VIII	0	0	1	0	↓100
IX	12	1	1	1	↑1100
X	2	1	1	0	↑100
XI	4	1	5	3	↓20
XII	4	3	1	0	↑300
BARMM	11	10	12	4	↓8
CAR	26	2	1	0	↑2500
CARAGA	0	0	3	0	↓100
NCR	44	13	43	9	↑2

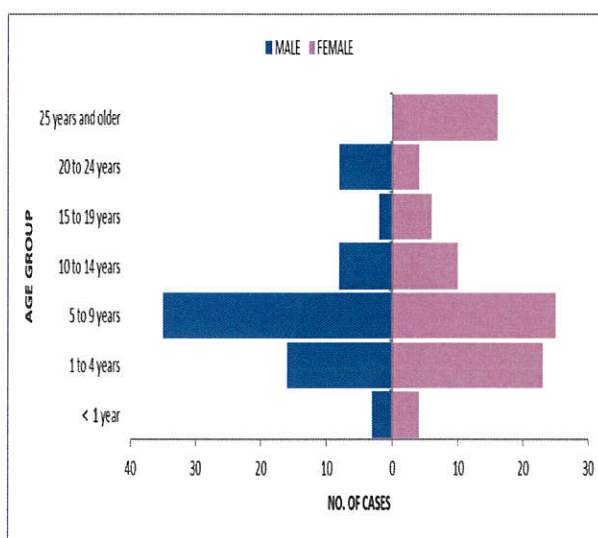


Profile of Cases

A. Cases

There were **73 males (45%)** and **88 females (55%)** among the reported diphtheria cases. Age of cases ranged from **3 months to 82 years old** (median age of 7 years). Age groups with most number of cases were **5 – 9 years old (60 or 38%)**, followed by **1 – 4 years old (39 or 24%)** (Figure 14).

Figure 14. Diphtheria Cases by Age Group and Sex, Philippines, January 1 to August 31, 2019 (N=161)



Vaccination status showed that **(34 or 21%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. **62 (39%)** 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 August 31, 2019 (N=161)

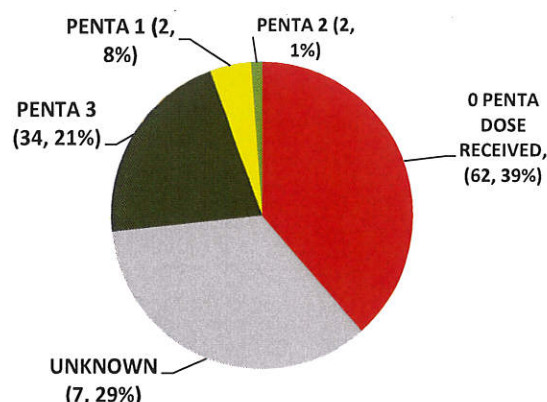
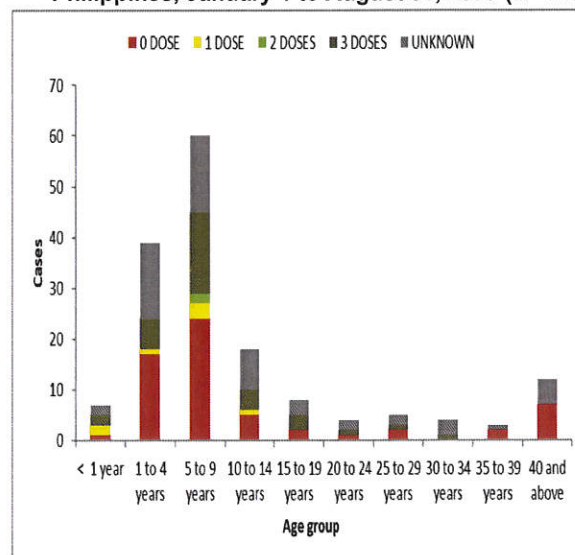


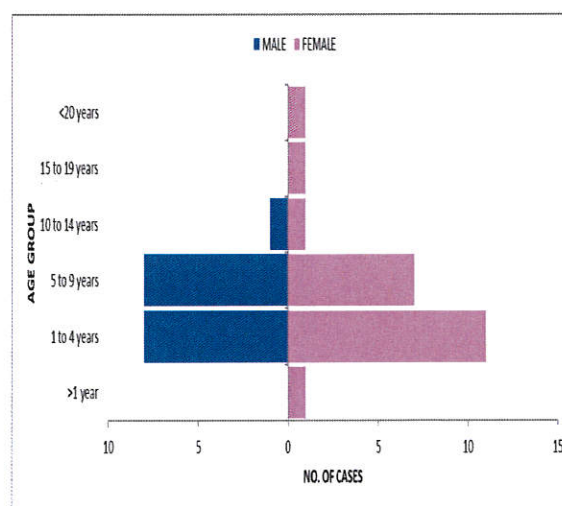
Figure 16. Diphtheria Cases by Age Group and DPT Dose Philippines, January 1 to August 31, 2019 (N=161)



B. Deaths

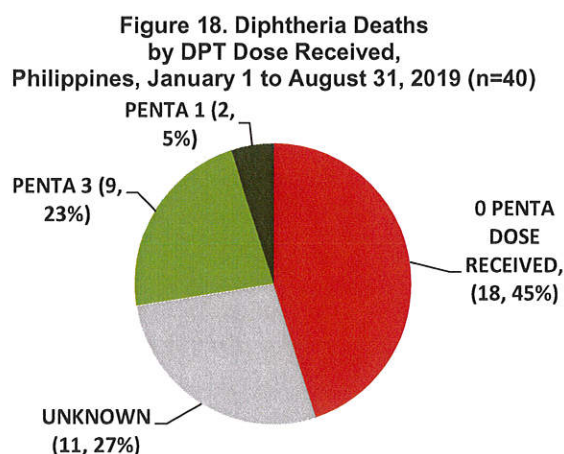
There were **40 deaths (CFR=25%)** among the 161 reported diphtheria cases. Ages of deaths ranged from 8 months to 28 years old (median age of 4 years). Age groups with the most number of deaths was **1 – 4 years 21 (53%)** followed by **5 – 9 years old (14 or 35%)** (Figure 17).

Figure 17. Reported Diphtheria Deaths by Age Group and Sex, Philippines, January 1 to August 31, 2019 (n=40)





Vaccination status showed that Majority 17 (49%) of the reported deaths did not received the DPT/Pentavalent vaccine while 8 (23%) receive 3 doses of the DPT/Pentavalent vaccine and 8 (23%) had unknown vaccination status. (Figure18).



C. Confirmed Cases

Four (40%) males and 6 (60%) females were laboratory confirmed diphtheria cases. Age ranges from 2 – 12 years old (median of 5 years old). 6 (60%) did not receive DPT/Pentavalent vaccine and 4 (40%) have unknown vaccination status.

D. Profile of Confirmed Diphtheria Deaths

There were Five (5) deaths among eight (8) 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 receive DPT/Pentavalent vaccines.

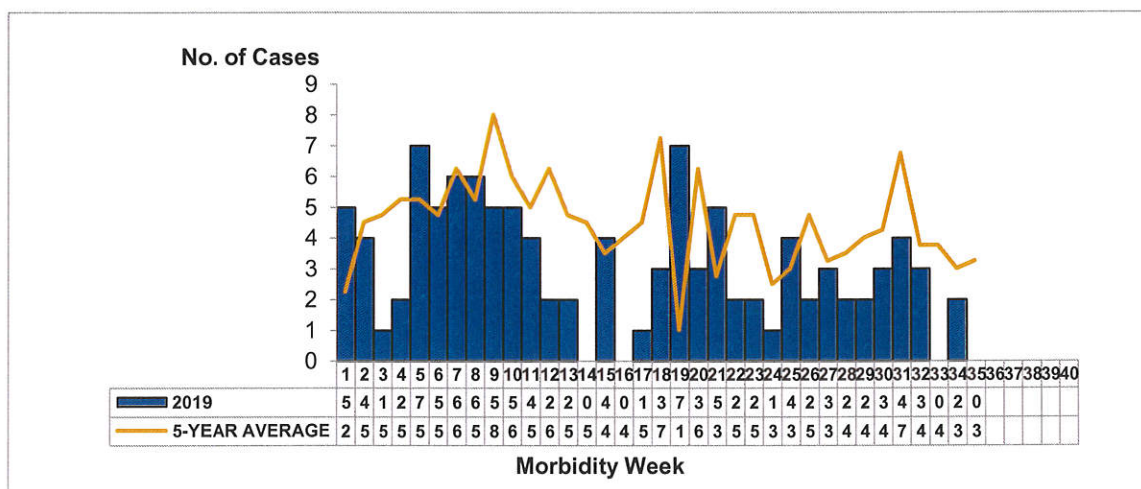


III. PERTUSSIS

Trend in the Philippines

A total of **107** pertussis cases were reported nationwide from January 1 – August 31, 2019. The distribution of pertussis cases for 2019 compared to the 5 - year average of cases from 2014 to 2018 is shown below (Figure 19).

Figure 19. Reported Pertussis Cases by Morbidity Week, Philippines, January 1 to August 31, 2019 (N=107)



Geographic Distribution

There has been a **57%** decrease among the reported pertussis cases with 247 cases in 2018 and 107 cases in 2019, same time period. Reported pertussis cases came from NCR reported to have (26 or 24%) followed by Region IVA with (18 or 17%) cases (Table 6). 15 (31%) cases were confirmed out of 107 cases. Three reported Pertussis clusters identified as of August 31, 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 August 31, 2019 (N=107) vs. January 1 to August 31, 2018

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	107	8	256	9	↓58
I	3	0	5	1	↓40
II	15	3	5	2	↑200
III	5	0	35	1	↓86
IVA- CALABARZON	18	1	33	1	↓45
IVB- MIMAROPA	0	0	1	0	↓100
V	0	0	1	0	↓100
VI	2	0	7	0	↓71
VII	8	0	23	1	↓65
VIII	0	0	2	0	↓100
IX	0	0	1	0	↓100
X	5	1	3	0	↑67
XI	13	1	34	2	↓62
XII	3	0	2	0	↑50
BARMM	0	0	6	0	↓100
CAR	9	0	25	1	↓64
CARAGA	0	0	8	0	↓100
NCR	26	2	65	0	↓60

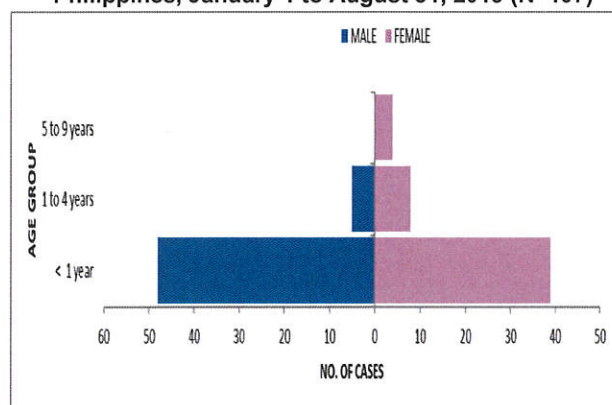


Profile of Cases

A. Cases

There were **56 males (52%)** and **51 females (48%)** among the reported pertussis cases. Age of cases ranged from **<1 month to 9 years old** (median: 3 months). Age groups with most number of cases were **below 1 year old** with (87 or 81%). (Figure 20).

Figure 20. Pertussis Cases by Age Group and Sex, Philippines, January 1 to August 31, 2019 (N=107)



Vaccination status showed that **(12 or 12%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. **44 (42%)** did not receive a dose of the DPT/Pentavalent vaccine, **(27 or 26%)** have unknown dose received and **(14 or 13%)** received only 1 dose. (Figure 21).

Figure 21. Reported Pertussis Cases by DPT Dose Received, Philippines, January 1 to August 31, 2019 (N=107)

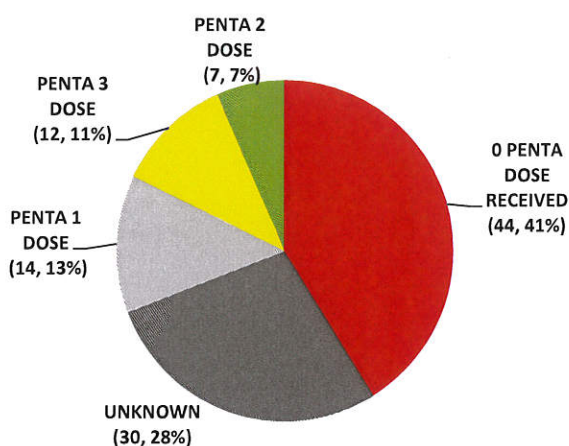
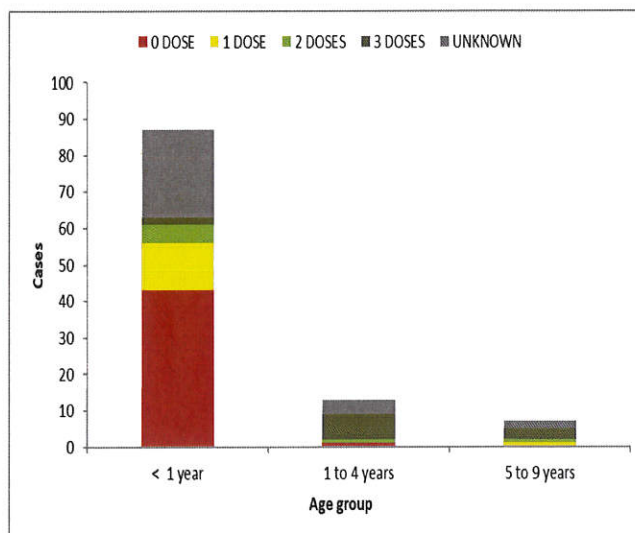


Figure 22. Reported Pertussis Cases by Age Group and DPT Dose Received, Philippines, January 1 to August 31, 2019 (N=107)



B. Deaths

There were **Eight (8)** deaths (CFR=7%) among the 94 reported pertussis cases. Ages: 35 days – 3 months old (median: 1 month)

Vaccination status showed that **(4 or 50%)** of the reported deaths did not received the DPT/Pentavalent vaccine and **(4 or 50%)** have unknown vaccination status.

C. Confirmed Cases

Seven (7) males and Eight (8) females were laboratory confirmed pertussis cases. Age ranges from less than 1 month – 4 years old (median 2 months old). Nine (60%) of the confirmed cases **were not vaccinated and (2 or 13%) received 1, 3, and unknown doses of DPT/Pentavalent vaccine.**

D. Profile of a Confirmed Pertussis death

There was one (1) death among twelve (12) confirmed pertussis cases. Age of death was 2 months old.

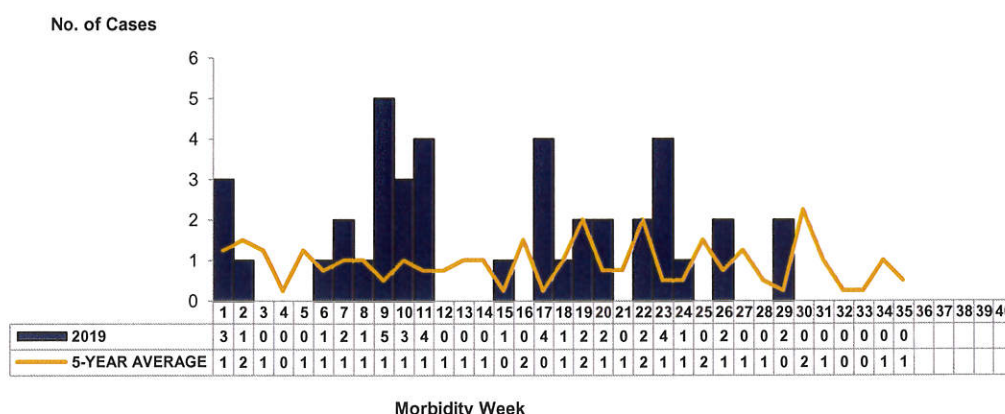


IV. NEONATAL TETANUS

Trend in the Philippines

A total of **41** clinically confirmed neonatal tetanus (NT) cases were reported nationwide from January 1 – August 31, 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 23).

Figure 23. Neonatal Tetanus Cases by Morbidity Week, Philippines, January 1 to August 31, 2019 (N=41)



Geographic Distribution

There has been 21% decrease among reported neonatal tetanus cases from 52 cases in 2018 to 40 cases in 2019, same time period. Most reported cases were from **BARMM (14 or 34%)** **MIMAROPA** with (6 or 15%), while Region XII have (4, 10%) 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 August 31, 2019 (N=41) vs. January 1 to August 31, 2018

REGION	2019			2018		
	Cases for MW 35	Annualize NT Rate >1/1000 LB	Deaths	Cases for MW 35	Annualize NT Rate >1/1000 LB	Deaths
PHILIPPINES	41	0.018	21	52	0.018	29
I	0	0.000	0	1	0.007	0
II	2	0.027	0	1	0.010	0
III	1	0.004	1	2	0.006	2
IVA- CALABARZON	3	0.010	3	4	0.010	3
IV-B MIMAROPA	6	0.085	2	0	0.000	0
V	3	0.022	3	0	0.000	0
VI	3	0.020	3	3	0.014	3
VII	0	0.000	0	1	0.005	0
VIII	0	0.000	0	2	0.016	1
IX	1	0.001	0	4	0.039	2
X	1	0.009	0	3	0.023	1
XI	0	0.000	0	2	0.014	0
XII	4	0.036	3	11	0.085	5
BARMM	14	0.145	4	14	0.126	9
CAR	0	0.000	0	0	0.000	0
CARAGA	2	0.033	2	2	0.027	2
NCR	1	0.004	0	2	0.005	1

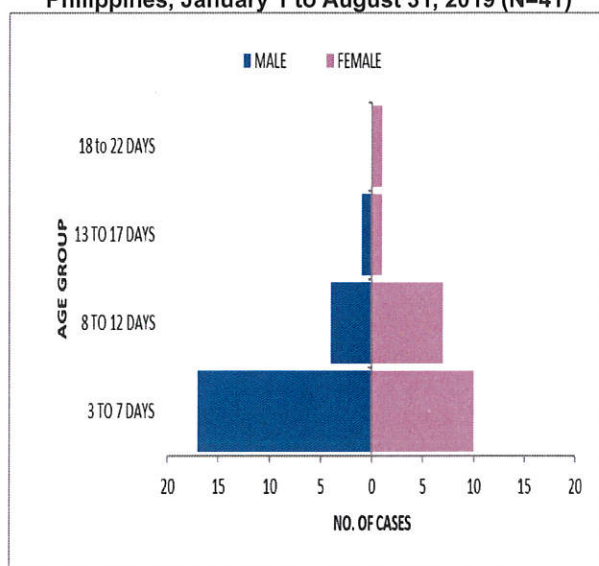


Profile of Cases

A. Age group and Sex

Among the clinically-confirmed NT cases, 22 (54%) **male** and 19 (46%) **female**. Age of cases ranges from 3 – 18 days old (median age of 7 days old). (Figure 23).

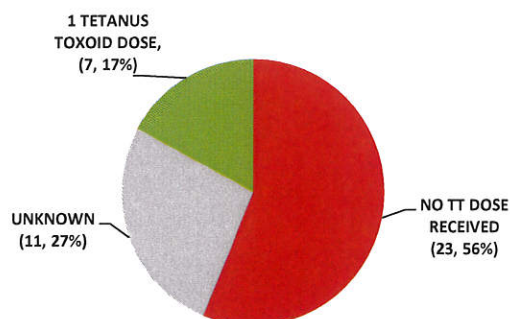
Figure 24. Clinically Confirmed Neonatal Tetanus Cases by Age Group and Sex, Philippines, January 1 to August 31, 2019 (N=41)



B. Vaccination Status

Twenty-two (55%) of the mothers of clinically confirmed cases **did not receive any dose of the tetanus toxoid vaccine**, followed with unknown vaccination status (11 or 28%) and (7 or 18%) received one dose of tetanus toxoid. (Figure 24).

Figure 25. Clinically Confirmed Neonatal Tetanus Cases by Vaccination Status, Philippines, January 1 to July 27, 2019 (N=40)



C. Delivery Practices among Clinically Confirmed Neonatal Tetanus Cases

In terms of delivery practices, Majority (38 or 93%) of the neonatal tetanus cases were delivered at home. Sixteen (39%) of the cases were attended by a traditional birth attendant, (5 or 12%) by a hilot, (13 or 32%) by a lay-person, and (5 or 12%) unknown. Fifteen (37%) had blade, (12 or 29%) bamboo and (9 or 22%) scissors used as the common cord cutting tool while (1 or 2%) used other materials and (4 or 10%) was unknown (Table 8).

Table 8. Delivery Practices of Clinically Confirmed Neonatal Tetanus Cases, Philippines, January 1 to August 31, 2019 (N=41)

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

Delivery Practices	No. of Cases	Percentage
Place of Delivery		
Home	38	93%
Hospital	1	2%
Lying-in	2	5%
Delivery Attendant		
TBA	16	49%
Physician	1	2%
Hilot	5	12%
Lay-person	13	32%
Unknown	5	12%
Midwife	1	2%
Cord Cut Tool Used		
Blade	15	37%
Bamboo	12	29%
Scissors	9	22%
Unknown	4	10%
Others	1	2%
Stump Treatment Used		
Alcohol	14	34%
Povidone Iodine	2	5%
Others*	6	15%
Unknown	19	46%

coconut shell

Profile of Neonatal Tetanus Deaths

There were 21 deaths (CFR=51%) among the 41 neonatal tetanus cases. Ages of deaths ranges from 3 – 10 days old. Mother of reported deaths (10, 48%) had unknown vaccination status, (9 or 43%) did not received any dose, and (2 or 10%) receive one dose of Tetanus Toxoid.



D. Neonatal Tetanus Surveillance Indicators by Regions

The Philippines has a reporting rate of 67% 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 July 27, 2019 (N=40)

REGION	Clinically Confirmed Neonatal Tetanus Cases		
	NT Rate(1<(1,000LB)	TIMELINESS OF REPORTING	TIMELINESS OF INVESTIGATION
Philippines	41	REPORTING RATE ($\geq 80\%$)	INVESTIGATION RATE($\geq 80\%$)
I	0		
II	2		100.00%
III	1		100.00%
IVA	3	0%	100.00%
MIMAROPA	6	17%	100.00%
V	3	67%	100.00%
VI	3	33%	100.00%
VII	0		
VIII	0		
IX	1		
X	1		
XI	0		
XII	4	50%	100.00%
BARMM	14	43%	93.00%
CAR	0		100.00%
CARAGA	2		
NCR	1		
LEGEND:	1/1,000 LB	<80%	$\geq 80\%$

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.



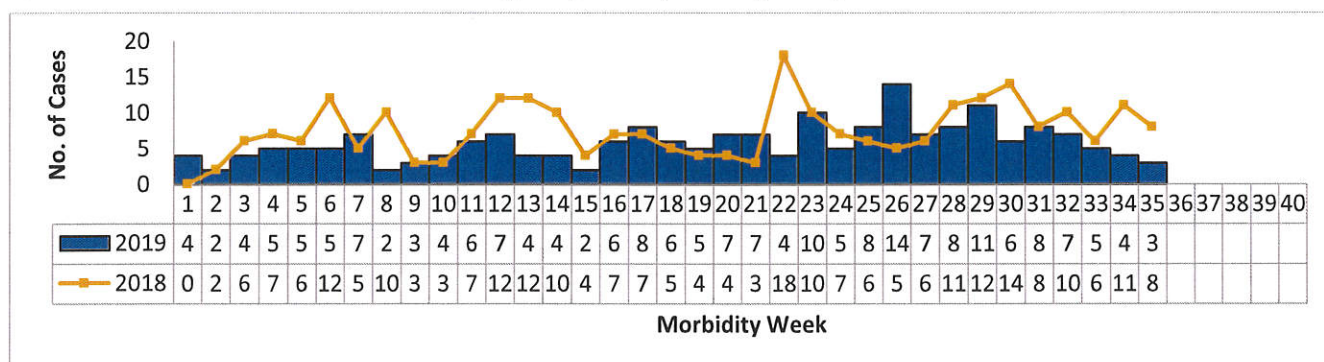
V. ACUTE FLACCID PARALYSIS

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 **204 AFP** cases were reported nationwide from January 1 to August 31, 2019. The distribution of AFP cases for 2019 compared to 2018 is shown below (Figure 26).

Figure 26. Trend of Reported AFP Cases (N=204)
Philippines, January 1 to August 31, 2019



Geographic Distribution

A total of 204 AFP cases were reported from January 1 to August 31, 2019. Among the 204 reported AFP cases, 106 (52%) were discarded as non-polio AFP, while 90 (44%) are still pending for 60-day follow-up, expert panel review and for official laboratory result. There were 8 (4%) reported cases that did not fit the case definition and were classified as *not AFP* (Table 10).

Table 10. Reported AFP Cases by Region and Classification
January 1 to August 31, 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	
PHILIPPINES	688	344	204	106	8	90	114
I	32	16	6	1	0	5	1
II	22	11	6	5	0	1	5
III	72	36	30	10	3	17	13
IVA- CALABARZON	96	48	22	7	1	14	8
IVB-MIMAROPA	22	11	0	0	0	0	0
V	44	22	9	4	0	5	4
VI	48	24	28	22	0	6	22
VII	51	25	15	11	0	4	11
VIII	32	16	11	8	1	2	9
IX	27	13	10	5	0	5	5
X	34	17	9	2	1	6	3
XI	34	17	14	11	0	3	11
XII	34	17	8	3	0	5	3
ARMM	36	18	4	3	0	1	3
CAR	11	6	5	4	0	1	4
CARAGA	19	9	2	0	0	2	0
NCR	74	38	25	10	2	13	12

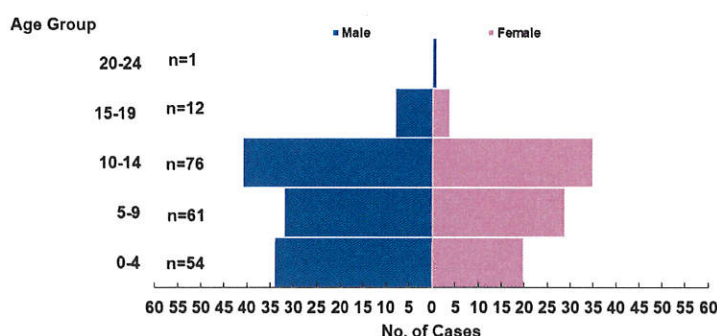


Profile of Cases

A. Age group and Sex

One hundred sixteen (57%) are males while 88 (43%) are females. Age ranges from 3 months to 22 years (median age of 9 years old). Seventy-six (37%) of the AFP cases reported belong to 10-14 age group (Figure 27).

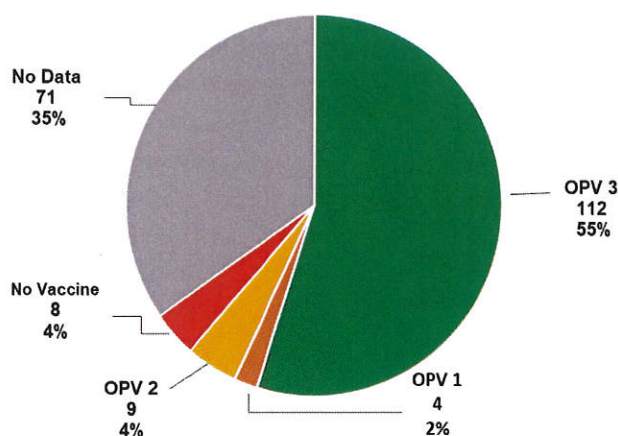
Figure 27. AFP Cases by Sex and Age Group (N=204)
Philippines, January 1 to August 31, 2019



B. Vaccination Status

Among the 204 reported AFP cases, 112 (55%) completed 3 doses of OPV, 9 (4%) had OPV 2 and 4 (2%) had OPV 1. Seventy-one (35%) had no data (Figure 28).

Figure 28. Vaccination Status of AFP Cases (N=204)
Philippines, January 1 to August 31, 2019



C. Laboratory Status

There were no isolated wild or vaccine-derived poliovirus from January 1 to August 31. Stool 1 was collected in 146 (72%) AFP cases and stool 2 in 132 (65%) of AFP cases. Two cases had poliovirus Sabin-like type 3 isolated (Table 11).

Table 11. Laboratory Status of Reported AFP Cases (N=204)
Philippines, January 1 to August 31, 2019

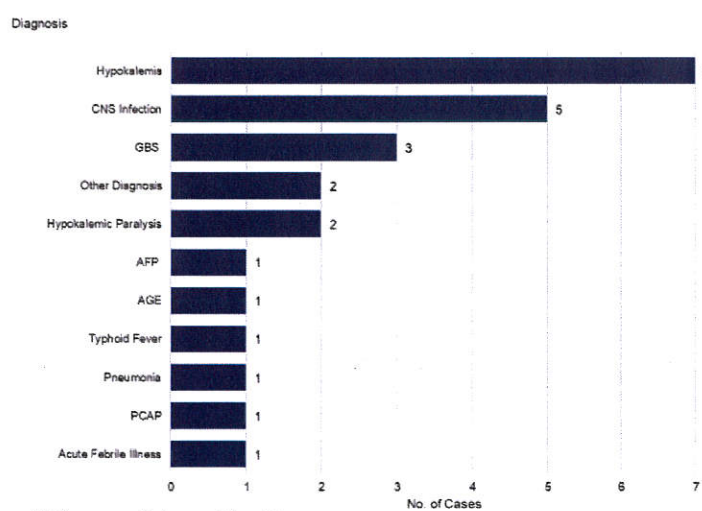
Stool Specimen Result	Stool Specimen 1		Stool Specimen 2	
Total	146	72%	132	65%
Negative for poliovirus	107	73%	99	75%
Others				
Poliovirus (Sabin-Like)*	2	1%	2	2%
Non-polio enterovirus (NPEV)	7	5%	8	6%
Pending Lab Results	30	21%	23	17%

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

D. Differential Diagnosis

The top diagnosis among AFP cases reported were Hypokalemia (5 or 3%). However, there are 128 (84%) cases with incomplete data. (Figure 29)

Figure 29. AFP Cases by Differential Diagnosis (N=204)
Philippines, January 1 to August 31, 2019



*176 cases with incomplete data

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

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.

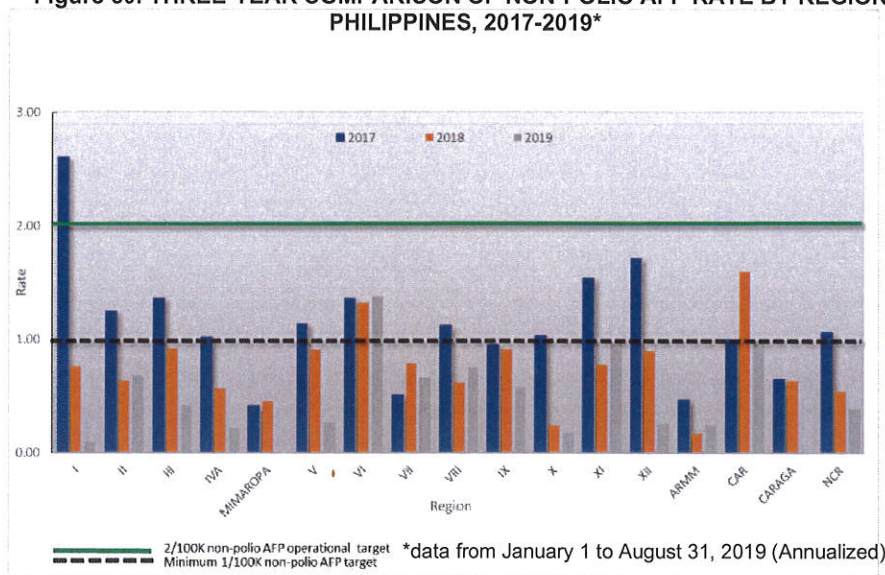


From January 1 to August 31, 2019, there were **204** AFP cases reported, providing the Philippines an annualized reporting rate of 0.89 / 100,000 population of children under 15 years old. Six (6) Regions were able to reach and surpass the target. The incidence of AFP (non-polio AFP rate) caused by diseases other than poliomyelitis is 0.46 / 100,000 population of children under 15 years of age. Two (2) Regions reached the target. (Figure 30 & Table 12)

TABLE 12. REPORTING AND NON-POLIO AFP RATE AS OF MW 1-35

REGION	Annualized Reporting Rate	Annualized Non-Polio AFP Rate
PHILIPPINES	0.89	0.46
I	0.56	0.09
II	0.82	0.68
III	1.25	0.42
IVA-CALABARZON	0.69	0.22
IVB-MIMAROPA	0.00	0.00
V	0.61	0.27
VI	1.75	1.38
VII	0.90	0.66
VIII	1.03	0.75
IX	1.15	0.58
X	0.79	0.18
XI	1.24	0.97
XII	0.71	0.26
BARMM	0.33	0.25
CAR	1.25	1.00
CARAGA	0.33	0.00
NCR	0.99	0.39

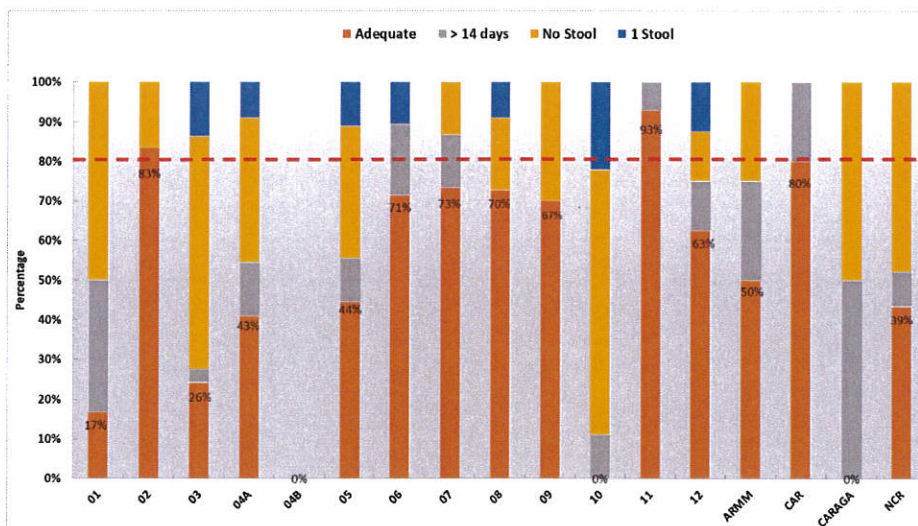
Figure 30. THREE-YEAR COMPARISON OF NON-POLIO AFP RATE BY REGION, PHILIPPINES, 2017-2019*



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 **196 non-polio and pending** AFP cases, **106 (54%)** cases have 2 stool specimens collected within 14 days from the onset which gives us an adequacy rate of 53% (Table 13). A portion, **14 cases or 7%** had 2 stool specimen collected beyond the required collection period. Among the 17 Regions, **3** Regions have reached or surpassed the target rate of 80%.

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



*Not AFP cases are excluded in the analysis

TABLE 13. STOOL SPECIMEN ADEQUACY RATE OF MW 1-35

Region	Stool Specimen Adequacy Rate
PHILIPPINES	53
I	17
II	83
III	26
IVA-CALABARZON	43
IVB-MIMAROPA	0
V	44
VI	71
VII	73
VIII	70
IX	70
X	0
XI	93
XII	63
BARMM	50
CAR	80
CARAGA	0
NCR	39

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.



ANNEX A. CLUSTER OF DIPHTHERIA CASES

MORBIDITY WEEK	REGION	PROVINCE	MUNCITY	BARANGAY	CASES	
					CONFIRMED	SUSPECT
5-7	III	BULACAN	BOCAUE	ANTIPONA	0	2
22	CAR	IFUGAO	HINGYON	NAMULDITAN	0	3
22	CAR	IFUGAO	LAGAWE	CUDOG	0	5
25	CAR	IFUGAO	ALFONSO LISTA	CALIMAG	0	11
25-26	V	CAMARINES SUR	TIGAON	SAN RAFAEL	0	2
25	NCR	METRO MANILA	QUEZON CITY	BATASAN HILLS	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
19	CAR	BAGUIO	BAGUIO CITY	APUKAGAN-LOAKAN	0	2