



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 July 27, 2019 or Morbidity Weeks 1 -30 (Table 1).

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

Vaccine Preventable Diseases	Total No of Cases	Confirmed Cases		
		Cases	Deaths	CFR %
Measles	40,729	-	-	-
Rubella		89	0	0
Diphtheria	126	9	5	55
Pertussis	94	14	1	7
Neonatal Tetanus	40	40	20	50
Polio (AFP Surveillance)	152	-	-	-

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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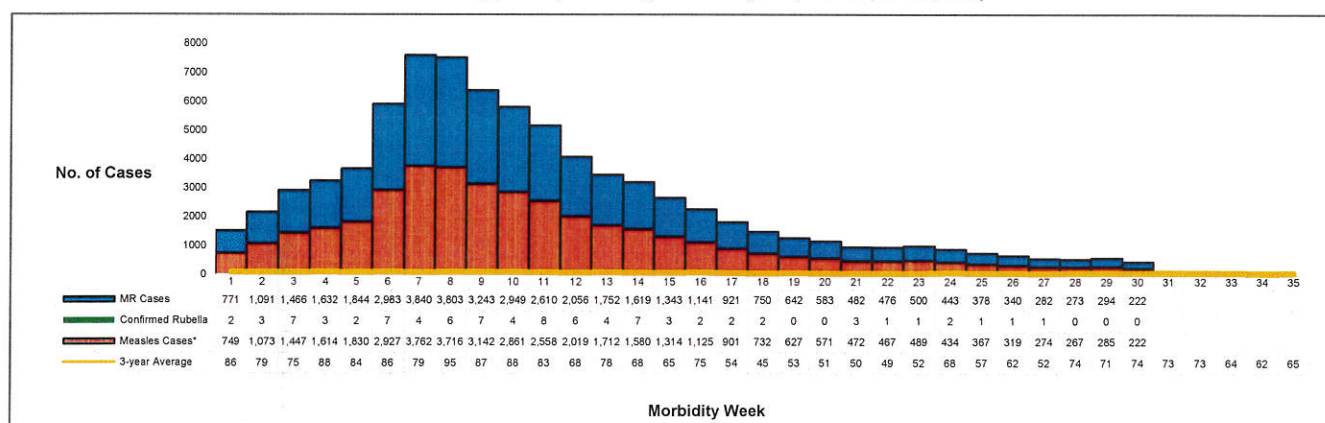
I. MEASLES-RUBELLA

Suspect Cases

Trend in the Philippines

There are 1, 035 Measles-Rubella cases reported to PIDSR for the month of July 2019 or morbidity weeks 27 to 30. This brings to a cumulative total of 40,729 from January 1 to July 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 July 27, 2019 (N=40,729)



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

Geographic Distribution

From January 1 to July 27, 2019 or morbidity weeks 1 to 30, cases are 208% higher than the number of cases reported during the same time period last year (13,212). Most of the reported cases were from the following regions: IV-A CALABARZON (7,350 or 18%), NCR (7,119 or 17%), Region III (6,511 or 16%), Region VI (2,526 or 6%), and Region X (2,165 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 July 27, 2019 (N=40,729) vs. January 1 to July 27, 2018

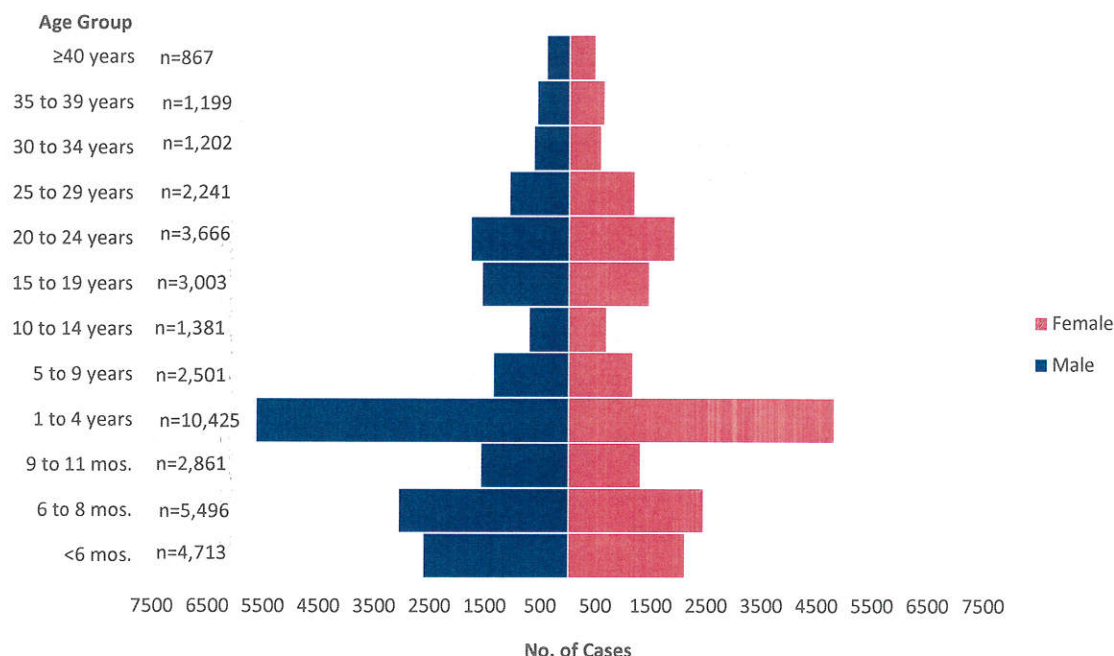
Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	40,729	544	13,212	109	↑ 208
I	1,817	21	272	0	↑ 568
II	625	3	52	0	↑ 1,102
III	6,511	118	511	6	↑ 1,174
IV-A CALABARZON	7,350	124	786	6	↑ 835
IV-B MIMAROPA	1,827	17	39	0	↑ 4,585
V	1,257	11	138	1	↑ 811
VI	2,526	8	241	0	↑ 948
VII	2,046	16	265	1	↑ 672
VIII	1,764	39	74	3	↑ 2,284
IX	575	2	1,231	7	↓ 53
X	2,165	16	1,212	2	↑ 79
XI	1,178	15	1,337	16	↓ 12
XII	805	6	1,317	11	↓ 39
BARMM	822	8	3,689	28	↓ 78
CAR	789	3	82	0	↑ 862
Caraga	1,553	21	250	2	↑ 521
NCR	7,119	116	1,716	26	↑ 315



Profile of Reported Cases

Majority (21,483 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 (10,609 or 26%), 6 to 8 months old (5,611 or 14%) and less than 6 months old (4,777 or 12%) (Figure 2).

Figure 2. Reported Measles-Rubella Cases by Age Group and Sex, Philippines, January 1 to July 27, 2019 (N=40,729)*



*303 cases with unspecified age

Majority (23,632 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 July 27, 2019 (N=40,729)

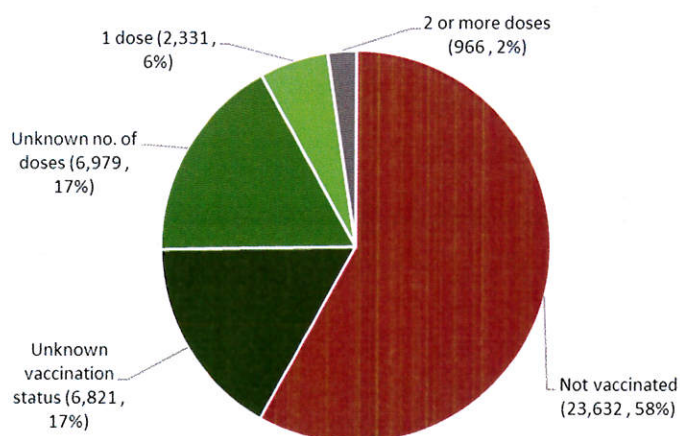
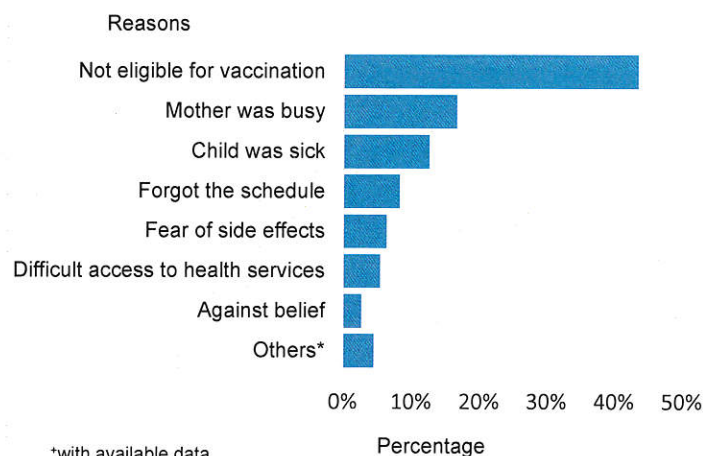


Figure 4. Reasons for Non-vaccination of Measles Vaccine*, Philippines, January 1 to July 27, 2019



*with available data

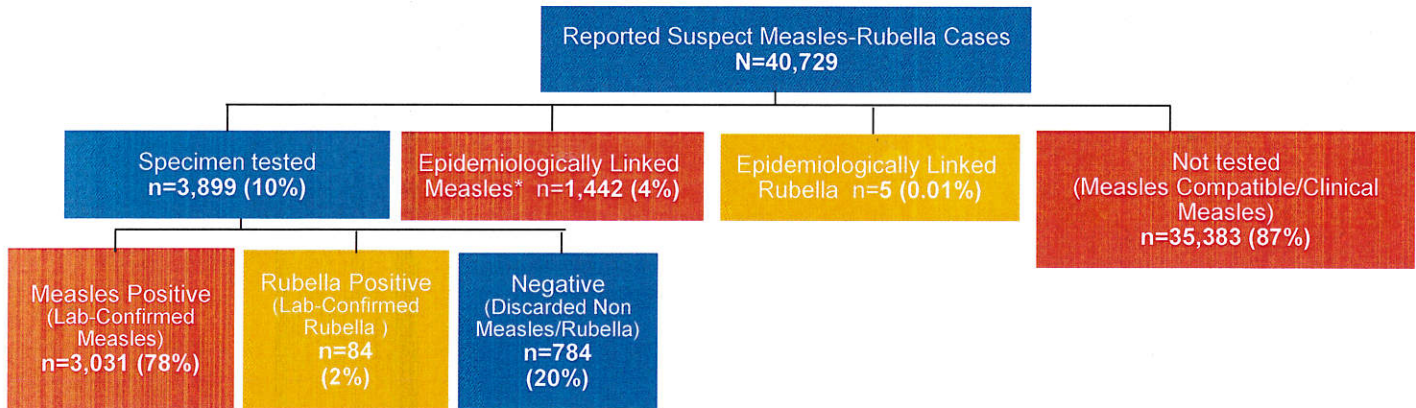
*other reasons: moves residence, lack of knowledge, history of travel, medical contraindication, refused vaccination, flood during immunization, received other vaccine, pregnant, mother was sick, lost vaccination card, child not available, card was left, laziness, with disaster



Case Classification

Among the 40,729, reported cases, a total of 3,899 (10%) cases were tested for measles/rubella IgM and/or PCR. Among the tested cases, 3,031 (78%) were positive for measles and 84 (2%) were positive for rubella. One thousand four hundred forty two (1,442 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 July 27, 2019 (N=40,729)



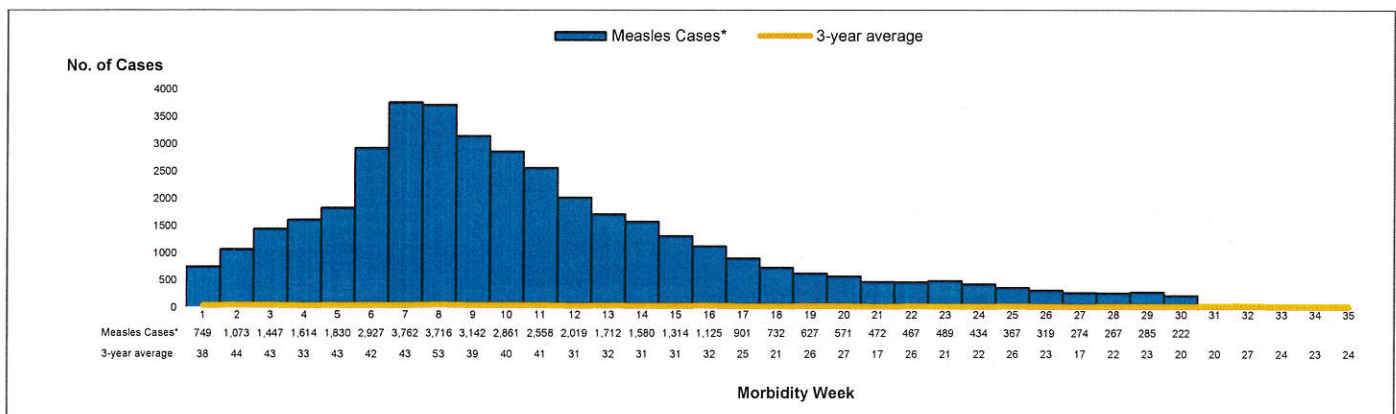
Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, and measles compatible (n=39,856)

Measles Cases

Trend in the Philippines

There are 1, 013 Measles cases were reported to PIDSR for the month of July 2019 or morbidity weeks 27 to 30. This brings to a cumulative total of 39,856 from January 1 to July 27, 2019 with 538 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 July 27, 2019 (n=39,856)



* Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, and measles compatible (n=39,856)



Geographic Distribution

Most of the measles cases were from the following regions: Region IV-A CALABARZON (7,292 or 18%), NCR (7,065 or 18%), Region III (6,405 or 16%), Region VI (2,380 or 6%) and Region X (2,141 or 5%). Measles cases in 2019 increased by 220% 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 (3,324 or 8%), Bulacan (1,831 or 5%), Pampanga (1,620 or 4%), Laguna (1,332 or 3%), and Cebu (1,324 or 3%).

Top 5 municipalities with measles cases include: Quezon City (2,053 or 5%), Manila (1,311 or 3%), Antipolo City (1,221 or 3%), Caloocan City (781 or 2%) and Cebu City (504 or 1%).

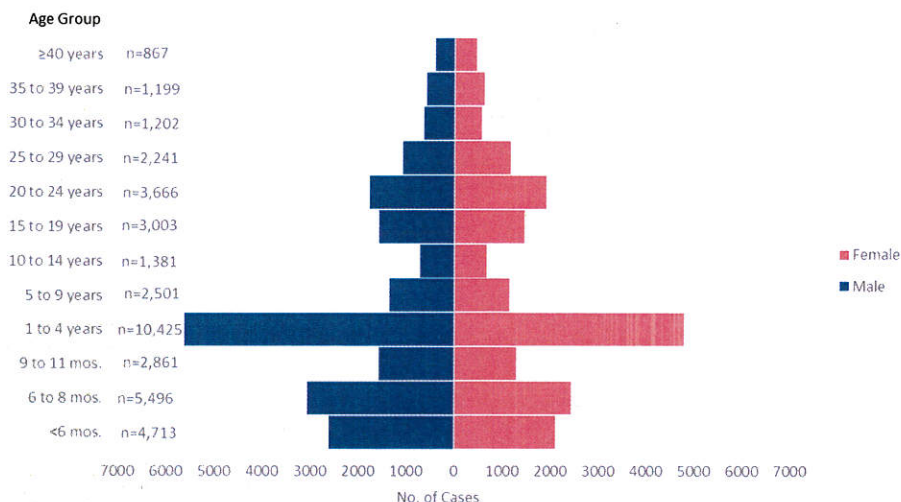
**Table 2. Measles Cases by Region,
Philippines, January 1 to July 27, 2019 (n=39,856) vs. January 1 to July 27, 2018**

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	39,856	538	12,469	107	↑ 220
I	1690	21	207	0	↑ 716
II	603	3	39	0	↑ 1,446
III	6405	116	440	6	↑ 1,356
IV-A CALABARZON	7292	123	719	6	↑ 914
IV-B MIMAROPA	1822	17	30	0	↑ 5,973
V	1231	11	115	1	↑ 970
VI	2380	8	168	0	↑ 1,317
VII	1972	14	225	1	↑ 776
VIII	1747	39	67	3	↑ 2,507
IX	557	2	1201	6	↓ 54
X	2141	16	1175	2	↑ 82
XI	1121	15	1251	16	↓ 10
XII	758	6	1252	11	↓ 39
BARMM	815	8	3676	28	↓ 78
CAR	720	3	57	0	↑ 1,163
Caraga	1537	21	213	2	↑ 622
NCR	7065	115	1634	25	↑ 332

Profile of Measles Cases

Majority (21,047, 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 (10,425 or 26%), 6-8 months old (5,496 or 14%), and less than 6 months old (4,713, 12%) (Figure 7).

**Figure 7. Measles Cases by Age Group and Sex,
Philippines, January 1 to July 27, 2019 (n=39,856)***



*301 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 (23,283 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 July 27, 2019 (n=39,856)

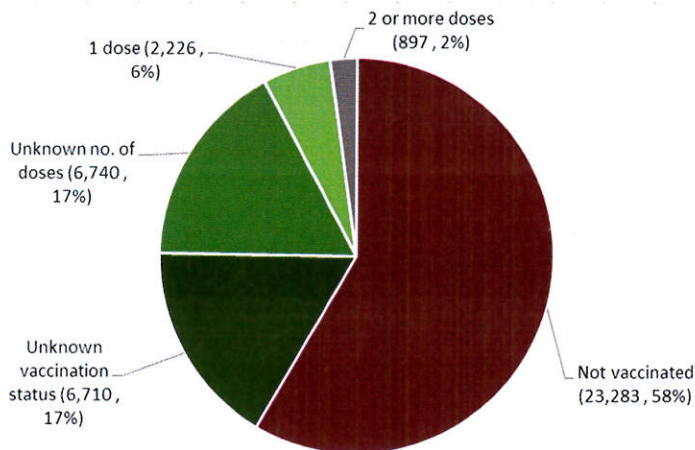
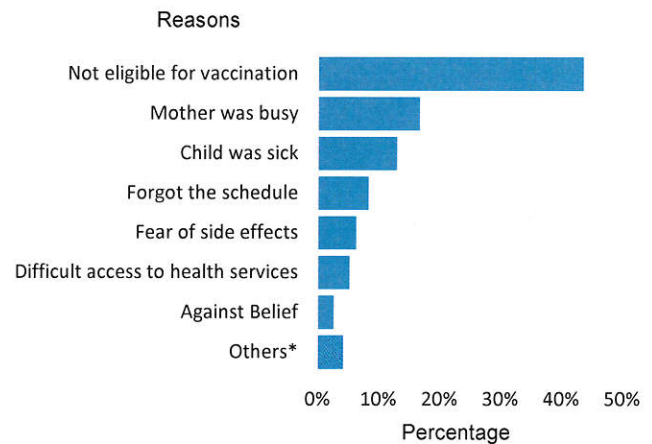


Figure 9. Reasons for Non-vaccination of Measles Vaccine among Measles Cases*, Philippines, January 1 to July 27, 2019



*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

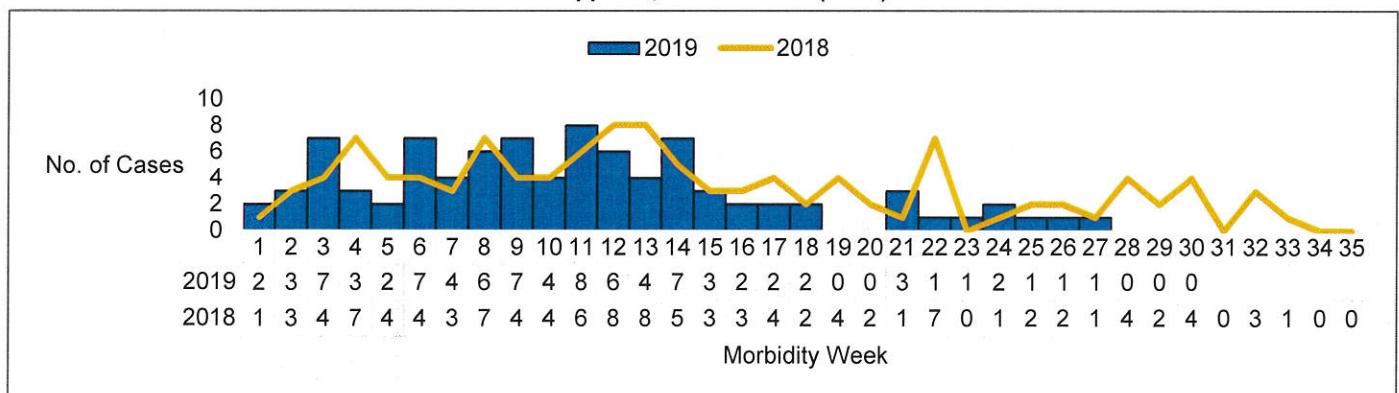
There were 538 deaths (CFR=1.3%) out of the 39,856 measles cases. Ages of deaths ranged from **less than 1 month – 59 years old** (median of 1 year). Most affected age groups with highest number of deaths were: 1-4 years (216 or 40%), less than 6 months (116 or 22%), and 6-8 months (107, 20%). Majority (420 or 78%) of deaths were not vaccinated.

Confirmed Rubella Cases

Trend in the Philippines

There were 89 confirmed rubella cases from January 1 to July 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=89)





Geographic Distribution

There were 89 reported confirmed rubella cases in all regions except for regions MIMAROPA and BARMM. This is 19% lower compared to the same time period in 2018 (110). However, Regions II, III, V, VI, VIII, and CAR showed increased 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 July 27, 2019 (n=89) vs. January 1 to July 27, 2018

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	89	0	110	0	↓ 19
I	7	0	8	0	↓ 13
II	4	0	2	0	↑ 100
III	13	0	7	0	↑ 86
IV-A CALABARZON	10	0	14	0	↓ 29
IV-B MIMAROPA	0	0	2	0	↓ 100
V	2	0	1	0	↑ 100
VI	20	0	5	0	↑ 300
VII	5	0	7	0	↓ 29
VIII	3	0	1	0	↑ 200
IX	2	0	3	0	↓ 33
X	4	0	4	0	-
XI	8	0	22	0	↓ 64
XII	1	0	13	0	↓ 92
BARMM	0	0	3	0	↓ 100
CAR	3	0	2	0	↑ 50
Caraga	2	0	6	0	↓ 67
NCR	5	0	10	0	↓ 50

Profile of Rubella Case

Majority (52 or 58%) 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 (19 or 21%) (Figure 11).

Twenty nine (33%) of the confirmed rubella cases were vaccinated but with unknown number of doses. Only 6 (7%) 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 July 27, 2019 (n=89)

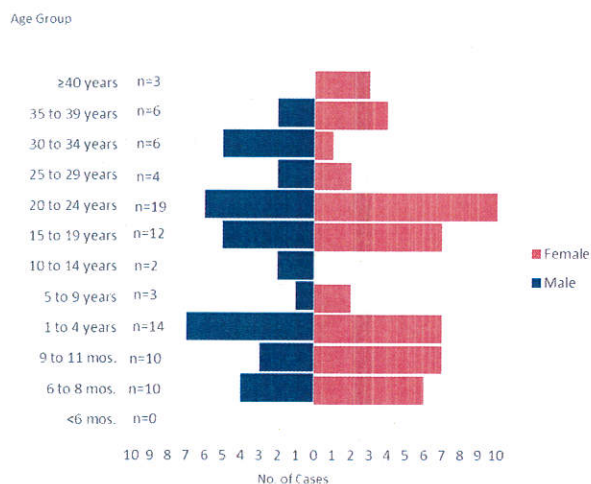
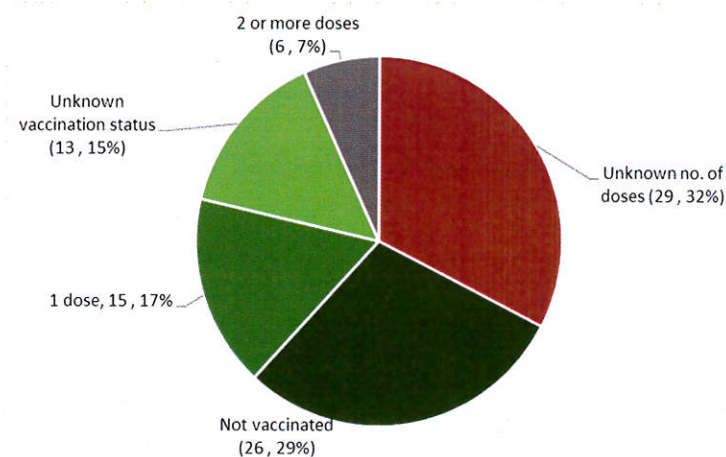


Figure 12. Vaccination Status of Confirmed Rubella Cases, Philippines, January 1 to July 27, 2019 (n=89)





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 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 3. Measles Surveillance Performance Indicators by Region, Philippines, January 1 to July 27, 2019 vs. January 1 to July 27, 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	9.91	97.42	17	63	27	28	8.99	59.40	1.88	3.92	65	77
II	2.39	46.32	25	71	23	18	2.49	29.54	0.53	0.85	65	81
III	22.25	58.52	21	63	68	34	7.38	92.25	0.92	1.32	56	92
IV-A CALABARZON	16.78	59.81	10	31	19	15	8.67	79.06	0.58	0.52	72	92
IV-B MIMAROPA	2.77	53.52	13	8	31	3	2.16	99.78	0.39	0.27	64	94
V	20.51	37.69	38	30	28	14	3.93	35.36	0.63	0.68	31	87
VI	15.41	67.68	43	72	31	31	5.30	54.97	1.50	2.74	41	82
VII	28.75	67.88	40	59	42	16	5.86	44.52	0.73	1.50	36	81
VIII	6.28	22.20	1	20	12	10	2.73	64.19	0.22	0.51	68	96
IX	147.73	22.07	5	43	33	23	56.13	25.90	1.23	0.72	71	88
X	87.07	104.81	6	45	46	24	42.21	74.16	1.15	0.69	76	85
XI	116.91	127.00	2	65	34	32	44.53	38.56	2.13	1.60	67	62
XII	137.30	58.42	3	64	46	34	46.97	28.16	1.85	1.61	66	73
ARMM	250.92	26.32	1	24	15	10	153.76	33.28	0.42	0.28	83	91
CAR	11.53	156.64	26	71	38	15	7.88	74.90	2.21	6.27	55	70
Caraga	44.53	45.22	16	21	18	8	15.90	97.53	1.97	0.88	57	94
NCR	77.44	122.67	21	26	25	6	21.82	89.11	0.92	0.61	60	85
PHL	52.28	70.99	9	43	29	18	21.33	64.64	1.02	1.24	70	87
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%	

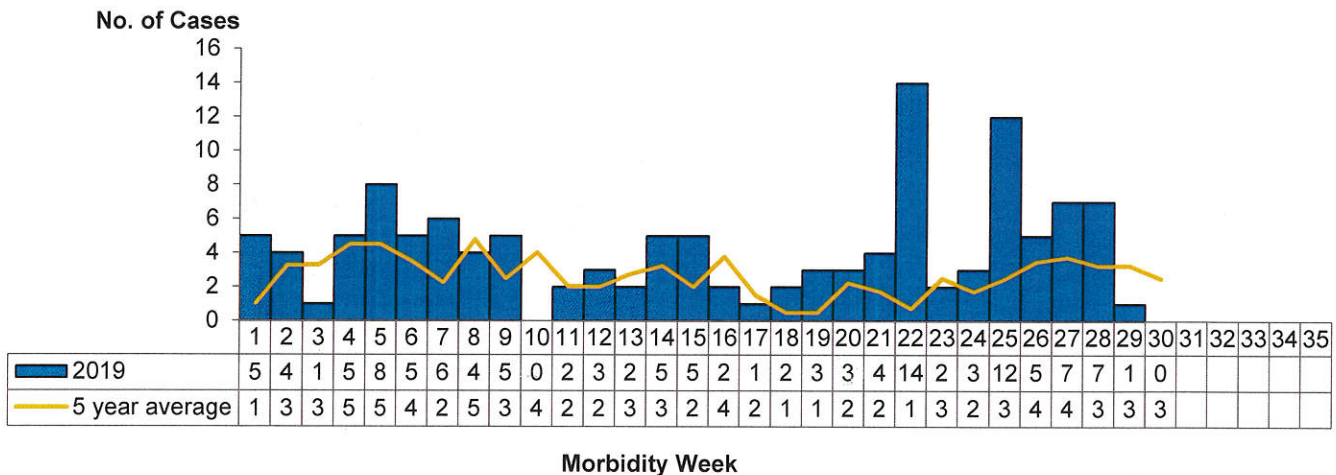


II. DIPHTHERIA

Trend in the Philippines

A total of 126 diphtheria cases were reported nationwide from January 1 – July, 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 - 30 (January 1 – July 27, 2019) vs Epidemic and Alert Thresholds Reported Diphtheria Cases (N=126)



Geographic Distribution

There has been a twenty-nine (29%) increase of diphtheria cases from 2018 (N=98) and 2019 (N=126), same time period. Majority of reported diphtheria cases came from NCR (33 or 26%) followed by CAR with (24 or 19%) cases. Region with the **highest increase in the percent change** was Region IX with 1000% increase (Table 4). Eight (14%) were laboratory confirmed out of 57 cases tested. Six (6) clusters were identified as of July 27, 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 (33 or 26%), Ifugao (23 or 18%), and Zamboanga del Sur with (9 or 7%) cases.

Table 4. Reported Diphtheria Cases by Region, Philippines, January 1 to July 27, 2019 (N=126) vs. January 1 to July 27, 2018

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	126	35	98	35	↑29
I	3	1	1	1	↑200
II	1	1	0	1	-
III	10	0	12	0	↓17
IV-A CALABARZON	15	1	19	1	↓21
IV-B MIMAROPA	1	1	0	1	-
V	6	3	5	3	20
VI	5	1	2	1	150
VII	0	0	2	0	↓100
VIII	0	0	1	0	↓100
IX	11	1	1	1	1000
X	1	0	1	0	0
XI	3	1	3	1	0
XII	4	3	0	3	-
BARMM	9	8	10	8	↓10
CAR	24	1	0	1	-
Caraga	0	0	3	0	↓100
NCR	33	13	38	13	↓13

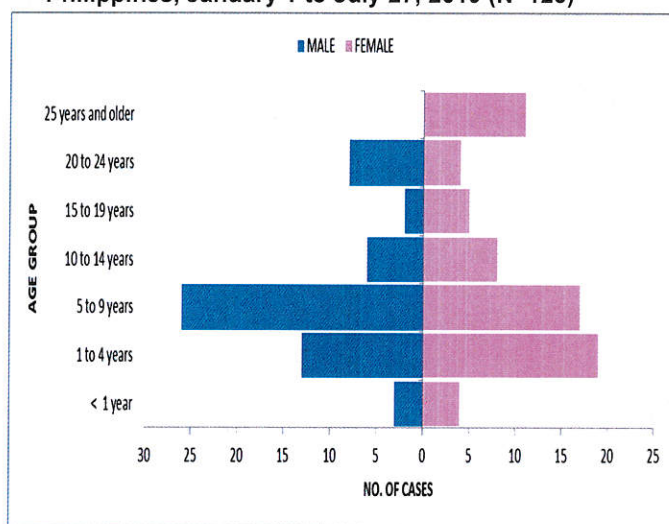


Profile of Cases

A. Cases

There were **58 males (46%)** and **68 females (54%)** 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 (43 or 34%)**, followed by **1 – 4 years old** with (32 or 25%) (Figure 14).

Figure 14. Diphtheria Cases by Age Group and Sex, Philippines, January 1 to July 27, 2019 (N=126)



Vaccination status showed that **(24 or 19%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine, **52 (41%)** 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 July 27, 2019 (N=126)

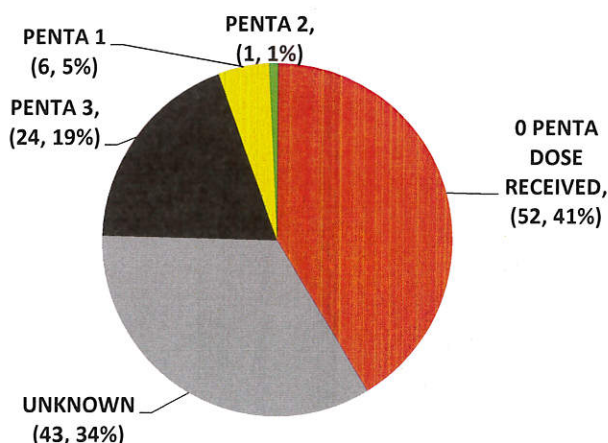
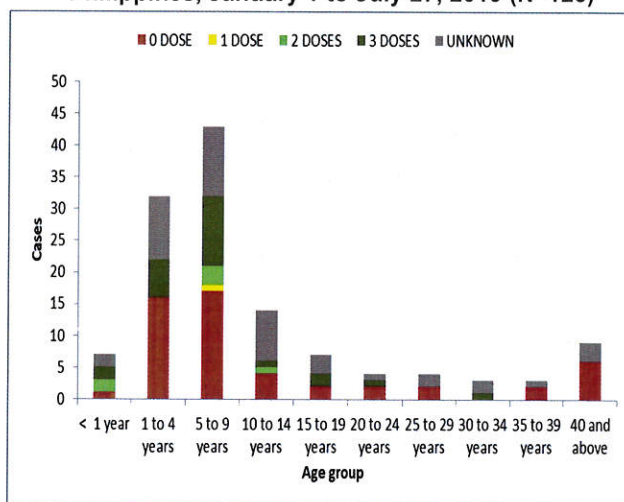


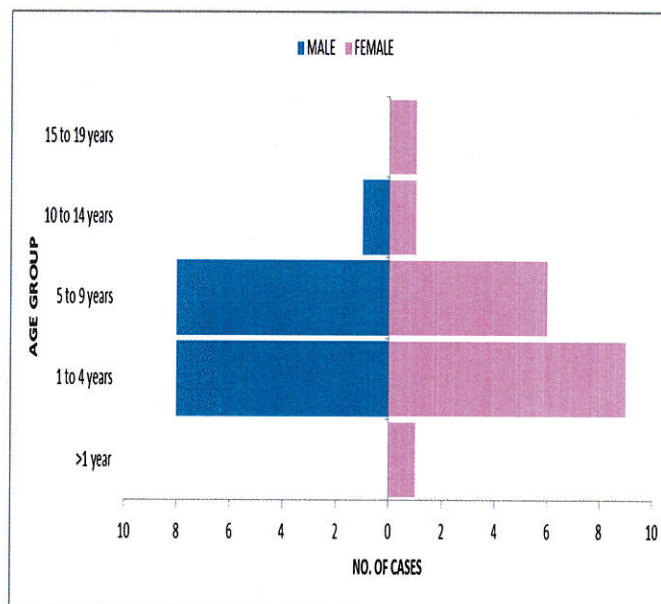
Figure 16. Diphtheria Cases by Age Group and DPT Dose Philippines, January 1 to July 27, 2019 (N=126)



B. Deaths

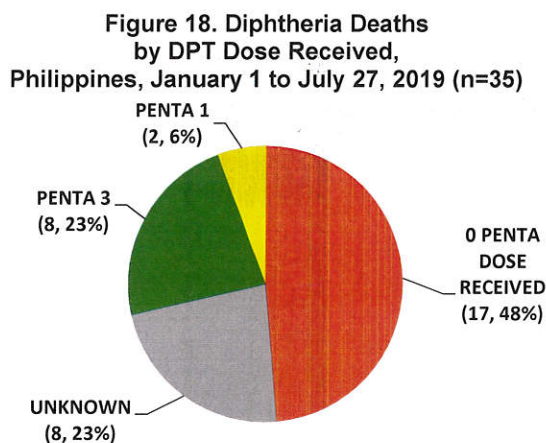
There were **35 deaths (CFR=28%)** among the 126 reported diphtheria cases. Ages of deaths ranged from 8 to 15 years old (median age of 4 years). Age groups with the most number of deaths was **1 – 4 years 17 (49%)** followed by **5 - 9 years old (14 or 40%)** (Figure 17).

Figure 17. Reported Diphtheria Deaths by Age Group and Sex Philippines, January 1 to July 27, 2019 (n=35)





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 (n=8)

Four (50%) males and 4 (50%) females were laboratory confirmed diphtheria cases. Age ranges from 2 – 12 years old (median of 5 years old). Five (62%) did not receive DPT/Pentavalent vaccine and 2 (25%) 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 received DPT/Pentavalent vaccines.

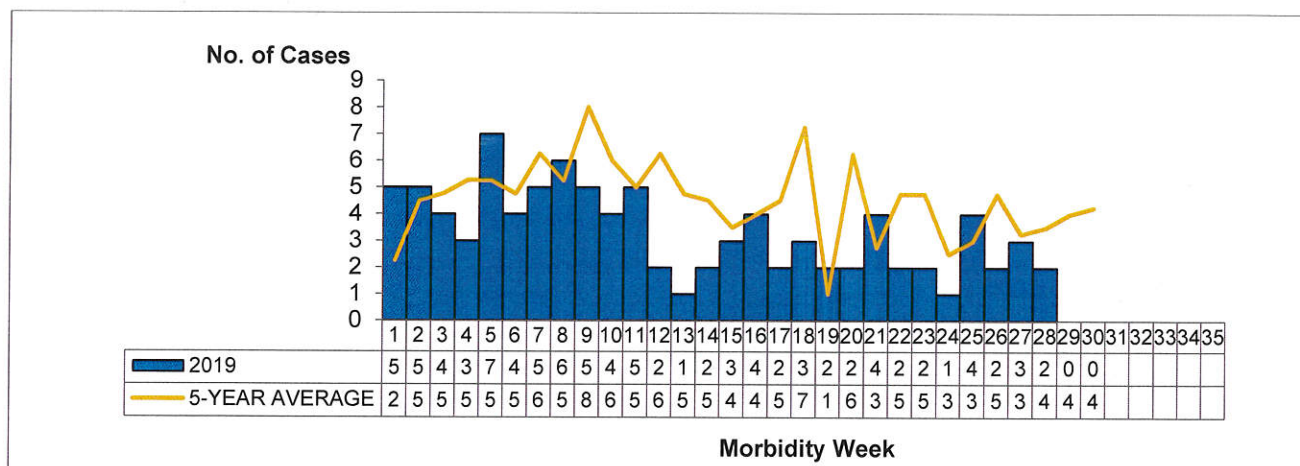


III. PERTUSSIS

Trend in the Philippines

A total of **94** pertussis cases were reported nationwide from January 1 – July 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 19).

Figure 19. Reported Pertussis Cases by Morbidity Week, Philippines, January 1 to July 27, 2019 (N=94)



Geographic Distribution

There has been a **58%** decrease among the reported pertussis cases with 224 cases in 2018 and 94 cases in 2019, same time period. Reported pertussis cases came from NCR reported to have (22 or 23%) followed by Region II with (15 or 16%) cases (Table 5). 14 (33%) cases were confirmed out of 94 cases. Three reported Pertussis clusters identified as of July 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 July 27, 2019 (N=94) vs. January 1 to July 27, 2018

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	94	8	224	9	↓58
I	3	0	5	1	↓40
II	15	3	5	2	↑200
III	6	0	31	1	↓81
IV-A CALABARZON	16	1	31	1	↓48
IV-B MIMAROPA	0	0	0	0	-
V	0	0	1	0	↓100
VI	2	0	4	0	↓50
VII	5	0	23	1	↓78
VIII	0	0	2	0	↓100
IX	0	0	1	0	↓100
X	4	1	3	0	↑33
XI	11	1	29	2	↓62
XII	3	0	2	0	↑50
BARMM	0	0	3	0	↓100
CAR	7	0	20	1	↓65
Caraga	0	0	6	0	↓100
NCR	22	2	58	0	↓62

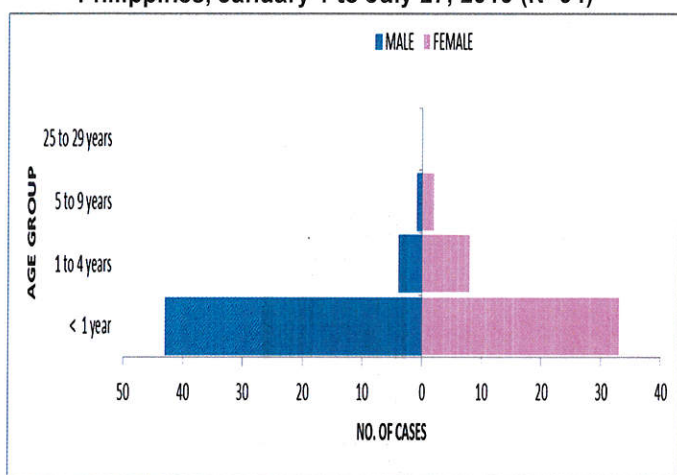


Profile of Cases

A. Cases

There were **51 males (54%)** and **43 females (46%)** among the reported pertussis cases. Age of cases ranged from **<1 month to 29 years old** (median: 3 months). Age groups with most number of cases were **below 1 year old** with (76 or 81%) followed by 1 – 4 years old with (12 or 13%) (Figure 20).

Figure 20. Pertussis Cases by Age Group and Sex, Philippines, January 1 to July 27, 2019 (N=94)



Vaccination status showed that **(11 or 12%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. **41 (44%)** did not receive a dose of the DPT/Pentavalent vaccine, **23 (24%)** have unknown dose received and **13(14%)** received only 1 dose. (Figure 21).

Figure 21. Reported Pertussis Cases by DPT Dose Received, Philippines, January 1 to July 27, 2019 (N=94)

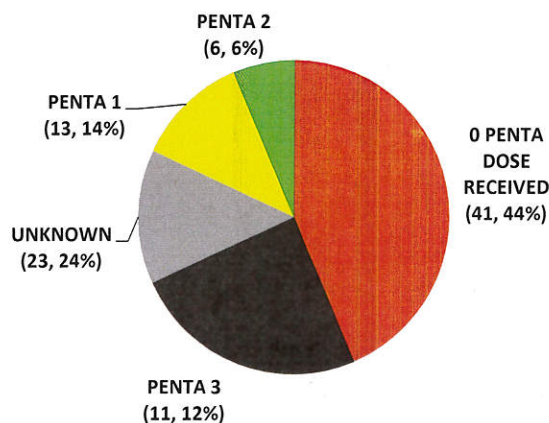
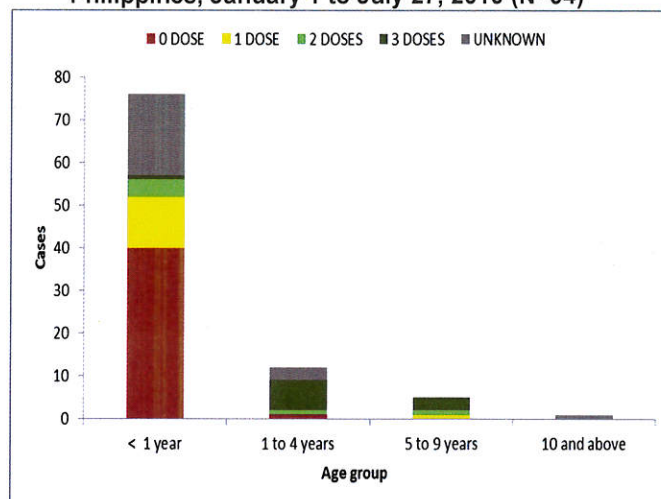


Figure 22. Reported Pertussis Cases by Age Group and DPT Dose Received, Philippines, January 1 to July 27, 2019 (N=94)



B. Deaths (n=8)

There were **Eight (8)** deaths (CFR=9%) 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 (n=14)

Six **(6)** males and Eight **(8)** females were laboratory confirmed pertussis cases. Age ranges from less than 1 month – 4 years old (median 2 months old). Eight (57%) of the confirmed cases **were not vaccinated** and **(2 or 14%)** 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.

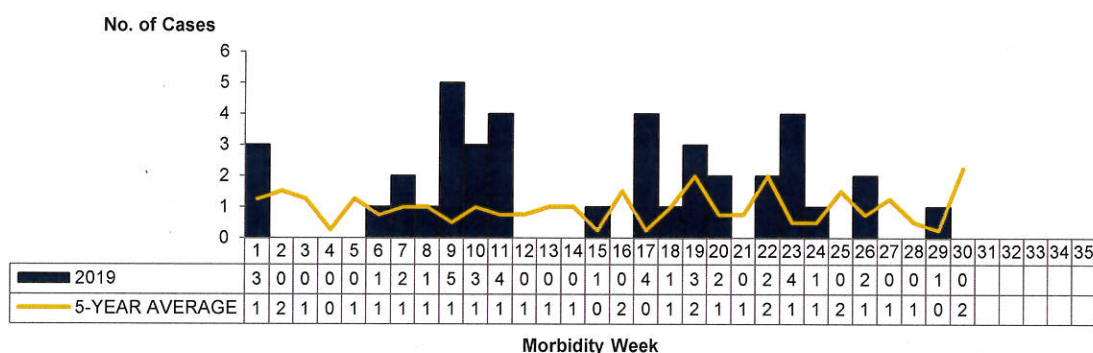


IV. NEONATAL TETANUS

Trend in the Philippines

A total of **40** clinically confirmed neonatal tetanus (NT) cases were reported nationwide from January 1 – July 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 23).

Figure 23. Neonatal Tetanus Cases by Morbidity Week, Philippines, January 1 to July 27, 2019 (N=40)



Geographic Distribution

There has been 2% decrease among reported neonatal tetanus cases from 41 cases in 2018 to 40 cases in 2019, same time period. Most reported cases were from **ARMM (14 or 35%)** **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 July 27, 2019 (N=40) vs. January 1 to July 27, 2018

REGION	2019			2018		
	Cases for MW 30	Annualize NT Rate >1/1000 LB	Deaths	Cases for MW 30	Annualize NT Rate >1/1000 LB	Deaths
PHILIPPINES	40	0.018	20	41	0.014	24
I	0	0.000	0	1	0.007	0
II	2	0.027	0	1	0.010	0
III	1	0.004	1	1	0.003	1
IV-A CALABARZON	3	0.010	3	2	0.005	2
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	0	0.000	0
VIII	0	0.000	0	2	0.016	1
IX	1	0.001	0	3	0.030	2
X	1	0.009	0	3	0.023	1
XI	0	0.000	0	0	0.000	0
XII	4	0.036	3	8	0.062	4
BARMM	14	0.145	4	13	0.117	7
CAR	0	0.000	0	0	0.000	0
Caraga	1	0.016	1	2	0.027	2
NCR	1	0.004	0	2	0.005	1

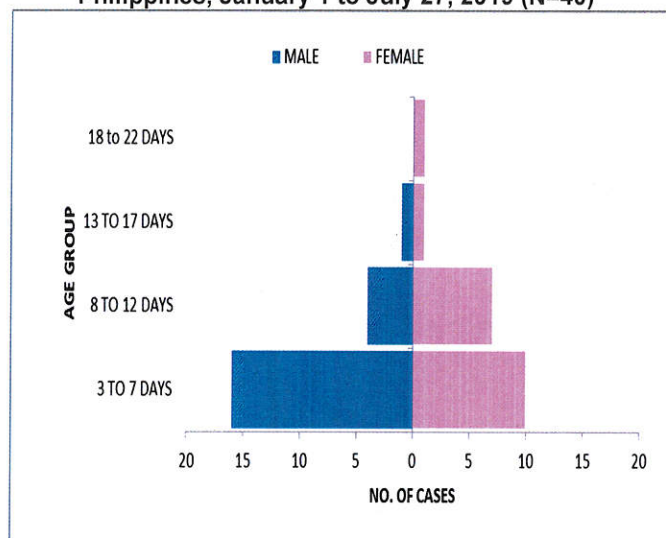


Profile of Cases

A. Age group and Sex

Among the clinically-confirmed NT cases, 21 (53%) **male** and 19 (47%) **female**. Age of cases ranges from 3 – 18 days old (median age of 7 days old). (Figure 23).

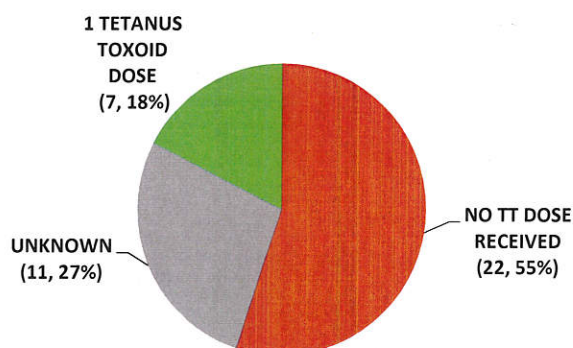
Figure 24. Clinically Confirmed Neonatal Tetanus Cases by Age Group and Sex, Philippines, January 1 to July 27, 2019 (N=40)



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 (37 or 93%) of the neonatal tetanus cases were delivered at home. Sixteen (40%) of the cases were attended by a traditional birth attendant, (5 or 12%) by a hilot, (12 or 30%) by a lay-person, and (5 or 12%) unknown. Fifteen (38%) had blade, (12 or 30%) bamboo and (8 or 20%) 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 July 27, 2019 (N=40)

Delivery Practices	No. of Cases	Percentage
Place of Delivery		
Home	37	93%
Hospital	1	2%
Lying-in	2	5%
Delivery Attendant		
TBA	16	40%
Physician	1	3%
Hilot	5	12%
Lay-person	12	30%
Unknown	5	12%
Midwife	1	3%
Cord Cut Tool Used		
Blade	15	38%
Bamboo	12	30%
Scissors	8	20%
Unknown	4	10%
Others	1	2%
Stump Treatment Used		
Alcohol	14	35%
Povidone Iodine	2	5%
Others*	5	13%
Unknown	19	47%

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

Profile of Neonatal Tetanus Deaths

There were 20 deaths (CFR=50%) among the 40 neonatal tetanus cases. Ages of deaths ranges from 3 – 10 days old. Mother of reported deaths (9, 45%) had unknown vaccination status, (9 or 45%) 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	0.014	REPORTING RATE ($\geq 80\%$)	INVESTIGATION RATE ($\geq 80\%$)
I	0.000		
II	0.021		100.00%
III	0.003		100.00%
IVA	0.007	0%	100.00%
MIMAROPA	0.072	16%	100.00%
V	0.018	67%	100.00%
VI	0.014	33%	100.00%
VII	0.000		
VIII	0.000		
IX	0.010		
X	0.008		
XI	0.029		
XII	0.108	50%	100.00%
BARMM	0.000	43%	93.00%
CAR	0.021		100.00%
CARAGA	0.014		
NCR	0.000		
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.



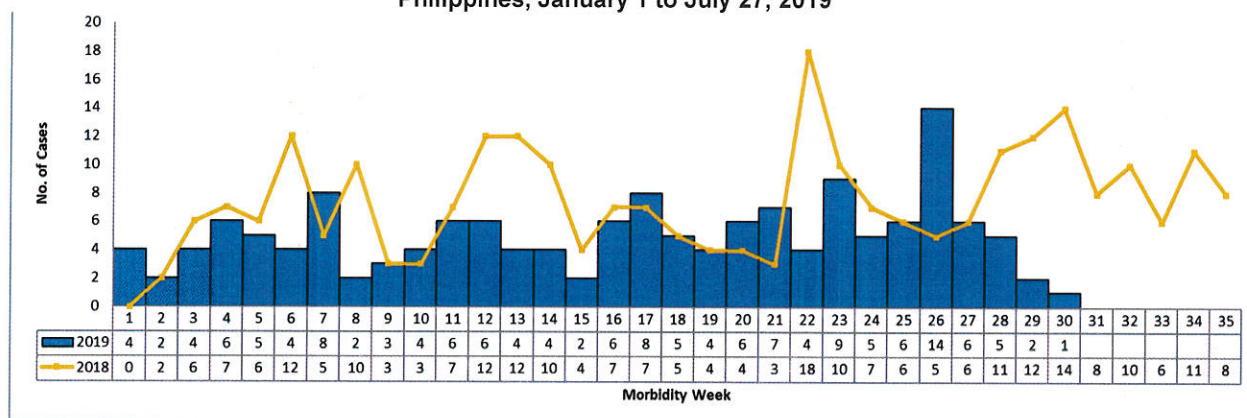
V. ACUTE FLACCID PARALYSIS

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

Figure 26. Trend of Reported AFP Cases (N=152)
Philippines, January 1 to July 27, 2019



Geographic Distribution

A total of 152 AFP cases were reported from January 1 to July 27, 2019. Among the 152 reported AFP cases, 77 (51%) were discarded as non-polio AFP, while 68 (45%) are still pending for 60-day follow-up, expert panel review and for official laboratory result. There were 7 (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 July 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	
PHILIPPINES	688	344	152	77	7	68	84
I	32	16	5	1	0	4	1
II	22	11	5	5	0	0	5
III	72	36	17	2	3	12	5
IV-A	96	48	16	5	1	10	6
MIMAROPA	22	11	0	0	0	0	0
V	44	22	9	3	0	6	3
VI	48	24	20	17	0	3	17
VII	51	25	14	9	0	5	9
VIII	32	16	10	5	1	4	6
IX	27	13	6	3	0	3	3
X	34	17	6	2	0	4	2
XI	34	17	13	9	0	4	9
XII	34	17	7	3	0	4	3
BARMM	36	18	4	2	0	2	2
CAR	11	6	4	4	0	0	4
Caraga	19	9	2	0	0	2	0
NCR	74	38	14	7	2	5	9

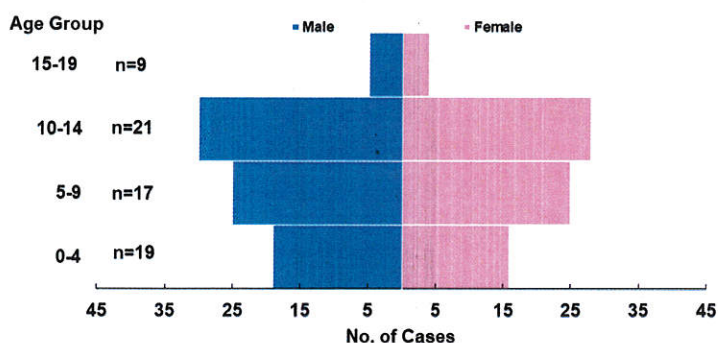


Profile of Cases

A. Age group and Sex

Seventy-nine (52%) are males while 73 (48%) are females. Age ranges from 3 months to 16 years (median age of 9 years old). Fifty-eight (38%) of the AFP cases reported belong to 10-14 age group (Figure 26).

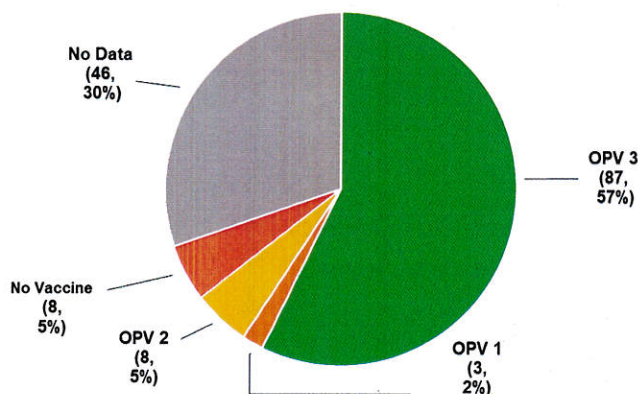
Figure 27. AFP Cases by Sex and Age Group (N=152) Philippines, January 1 to July 27, 2019



B. Vaccination Status

Among the 152 reported AFP cases, 87 (57%) completed 3 doses of OPV, 8 (5%) had OPV 2 and 3 (2%) had OPV 1. Forty-six (30%) had no data (Figure 27).

Figure 28. Vaccination Status of AFP Cases (N=152) Philippines, January 1 to July 27, 2019



C. Laboratory Status

There were no isolated wild or vaccine-derived poliovirus from January 1 to July 27. Stool 1 was collected in 111 (73%) AFP cases and stool 2 in 98 (64%) of AFP cases. Two cases had poliovirus Sabin-like type 3 isolated (Table 10).

Table 11. Laboratory Status of Reported AFP Cases (N=152) Philippines, January 1 to July 27, 2019

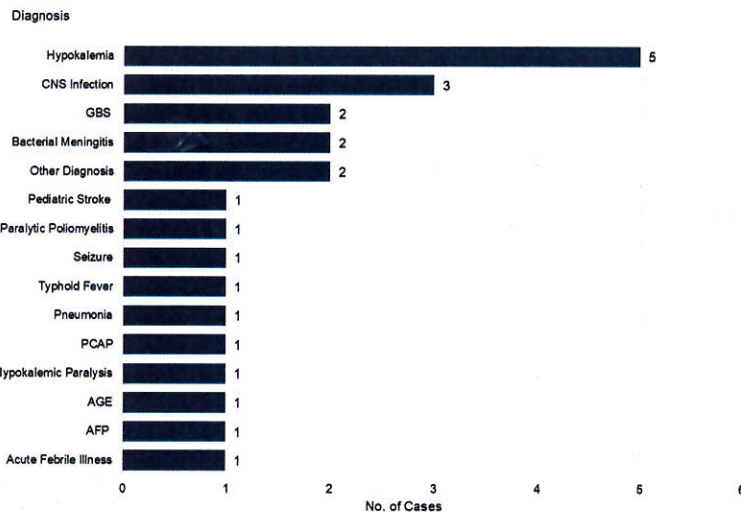
Stool Specimen Result	Stool Specimen 1		Stool Specimen 2	
Total	111	73%	98	64%
Negative for poliovirus	85	77%	78	80%
Others				
Poliovirus (Sabin-Like)*	2	2%	2	2%
Non-polio enterovirus (NPEV)	4	4%	5	5%
Pending Lab Results	20	18%	13	13%

* 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=152) Philippines, January 1 to July 27, 2019



*128 cases with incomplete data



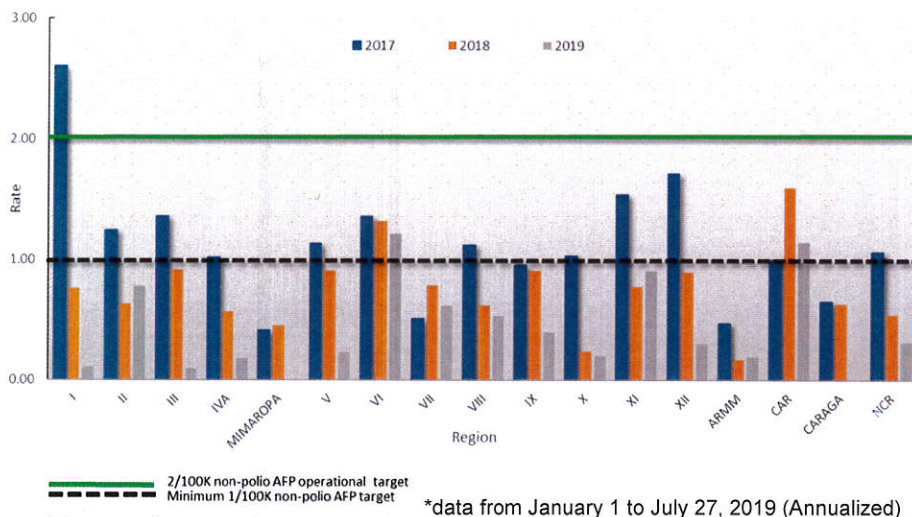
SURVEILLANCE PERFORMANCE INDICATORS – AFP REPORTING RATE AND NON – POLIO AFP RATE

From January 1 to July 27, 2019, there were **152** AFP cases reported, providing the Philippines an annualized reporting rate of **0.76 / 100,000** population of children under 15 years old. Four (4) Regions were able to reach and surpass the target. The incidence of AFP (non-polio AFP rate) caused by diseases other than poliomyelitis is **0.38 / 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 1-30

REGION	Annualized Reporting Rate	Annualized Non-Polio AFP Rate
PHILIPPINES	0.76	0.38
I	0.54	0.11
II	0.78	0.78
III	0.81	0.10
IV-A	0.57	0.18
MIMAROPA	0.00	0.00
V	0.70	0.23
VI	1.43	1.21
VII	0.96	0.62
VIII	1.07	0.54
IX	0.79	0.40
X	0.61	0.20
XI	1.31	0.91
XII	0.71	0.30
BARMM	0.38	0.19
CAR	1.14	1.14
Caraga	0.38	0.00
NCR	0.63	0.32

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



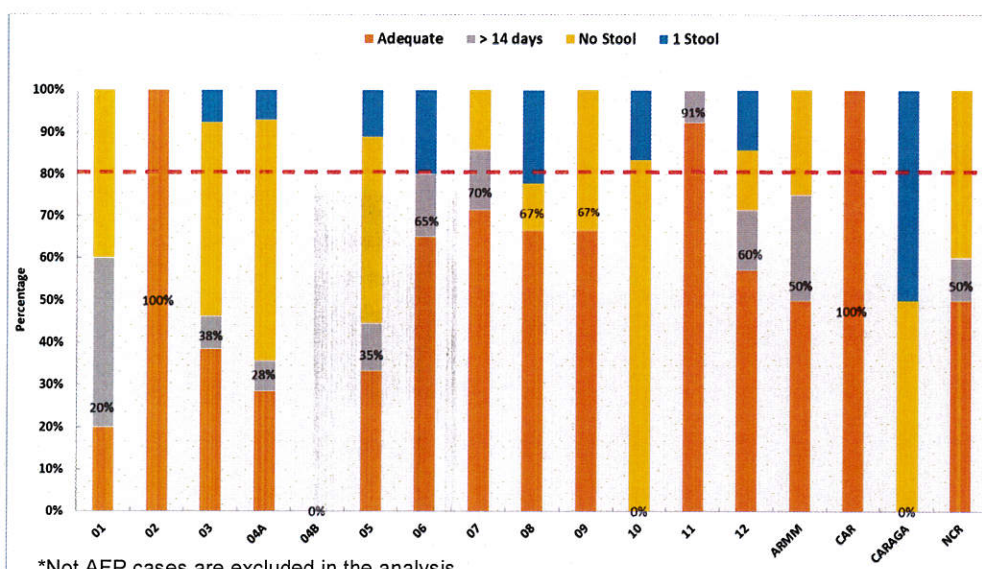
SURVEILLANCE PERFORMANCE INDICATORS – STOOL SPECIMEN ADEQUACY RATE

All AFP cases should have full clinical and virological investigation with at least 80% of AFP cases having adequate stool specimens collected. Among the **145 non-polio and pending AFP cases, 78 (54%) cases** have 2 stool specimens collected within 14 days from the onset which gives us an adequacy rate of **54%** (Table 12). A portion, **14 cases or 10%** 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 – July 27, 2019

TABLE 13. STOOL SPECIMEN ADEQUACY RATE OF MW 1-30

Region	Stool Specimen Adequacy Rate
PHILIPPINES	54
I	20
II	100
III	36
IV-A	27
MIMAROPA	0
V	33
VI	65
VII	71
VIII	67
IX	67
X	0
XI	92
XII	57
BARMM	50
CAR	100
Caraga	0
NCR	42



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