



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 28, 2018 or Morbidity Weeks 1 - 30 (Table 1).

Table 1. Summary of Reported Vaccine Preventable Diseases, Philippines, January 1 – July 28, 2018

Vaccine Preventable Diseases	Total No of Cases	Confirmed Cases		
		Cases	Deaths	CFR %
Measles	12,348	2,093	30	1.43
Rubella		82	0	0.00
Diphtheria	94	32	7	21.88
Pertussis	216	66	5	7.58
Neonatal Tetanus	36	36	20	55.56
Polio (AFP Surveillance)	216	-	-	-

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 (\leq 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	<ul style="list-style-type: none"> - 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)	<ul style="list-style-type: none"> 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 <p>AFP "hotcase" An AFP case with no or less than 3 OPV dose and had FEVER at onset of paralysis</p>

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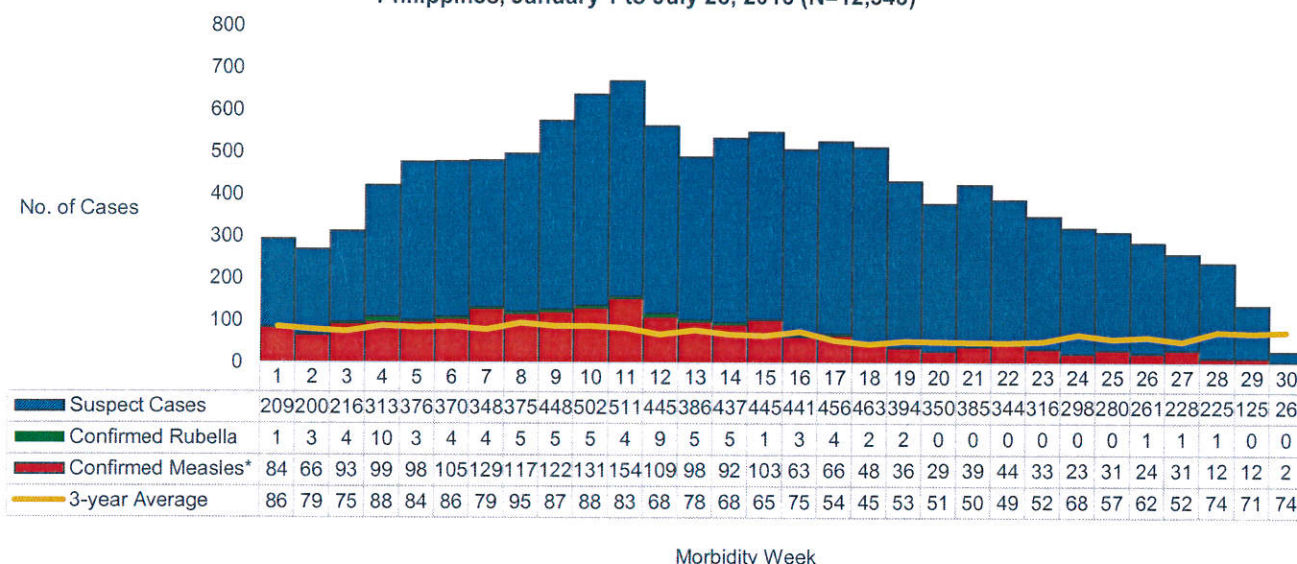
I. MEASLES-RUBELLA

Suspect Cases

Trend in the Philippines

A total of 12,348 suspect measles-rubella cases were reported from January 1 to July 28, 2018. The distribution of reported cases for 2018 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 28, 2018 (N=12,348)



*laboratory-confirmed and epidemiologically-linked measles cases

Geographic Distribution

From January 1 to July 28, 2018 or morbidity weeks 1 to 30, cases are 476% higher than the number of cases reported during the same time period last year (2,143). Most of the reported cases were from the following regions: ARMM (3,506, 28%), NCR (1,616, 13%), Region XI (1,318, 11%), Region IX (1,187, 10%) and Region XII (1,187, 10%) (Table 1).

Table 1. Reported Measles-Rubella Cases by Region, Philippines, January 1 to July 28, 2018 (N=12,348) vs. 2017 same time period

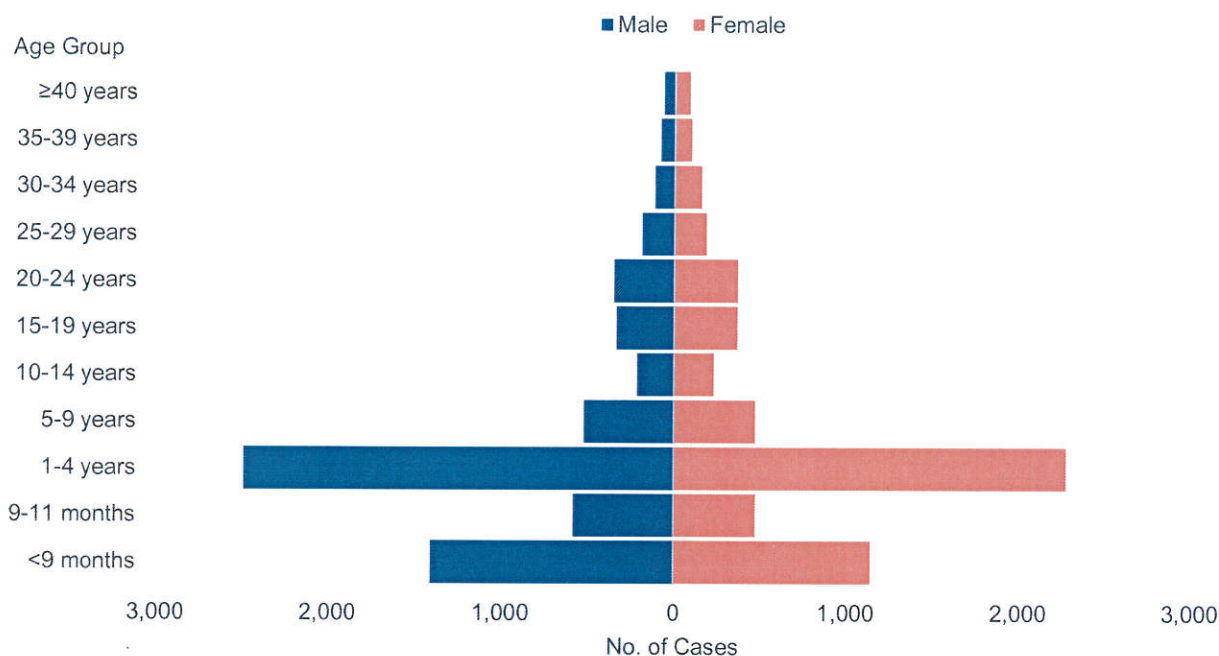
Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHL	12,348	105	2,143	8	↑ 476
I	221	0	276	1	↓ 20
II	51	0	37	0	↑ 38
III	471	6	207	1	↑ 128
IVA	697	4	407	3	↑ 71
MIMAROPA	32	0	38	0	↓ 16
V	132	1	48	0	↑ 175
VI	219	0	184	0	↑ 19
VII	256	1	38	0	↑ 574
VIII	52	1	72	0	↓ 28
IX	1,187	8	96	0	↑ 1,136
X	1,116	2	95	0	↑ 1,075
XI	1,318	18	46	0	↑ 2,765
XII	1,187	11	57	0	↑ 1,982
ARMM	3,506	31	121	3	↑ 2,798
CAR	72	0	150	0	↓ 52
CARAGA	215	0	32	0	↑ 572
NCR	1,616	22	239	0	↑ 576



Profile of Reported Cases

Majority (6,416, 52%) of the reported cases were male. Ages of cases ranged from **less than 1 month to 87 years** old (median age of 2 years). Age groups with the most number of cases were: 1-4 years old (4,770, 39%), less than 9 months old (2,547, 21%) and 9-11 months old (1,059, 9%) (Figure 2).

Figure 2. Reported Measles-Rubella Cases by Age Group and Sex, Philippines, January 1 to July 28, 2018 (N=12,348)



Majority (8,393, 68%) of the cases were not vaccinated (Figure 3). Top reasons for non-vaccination of measles-containing vaccine were: mother was busy (29%), not eligible for vaccination (25%) and child was sick (10%) (Figure 4).

Figure 3. Vaccination Status of Reported Measles-Rubella Cases, Philippines, January 1 to July 28, 2018 (N=12,348)

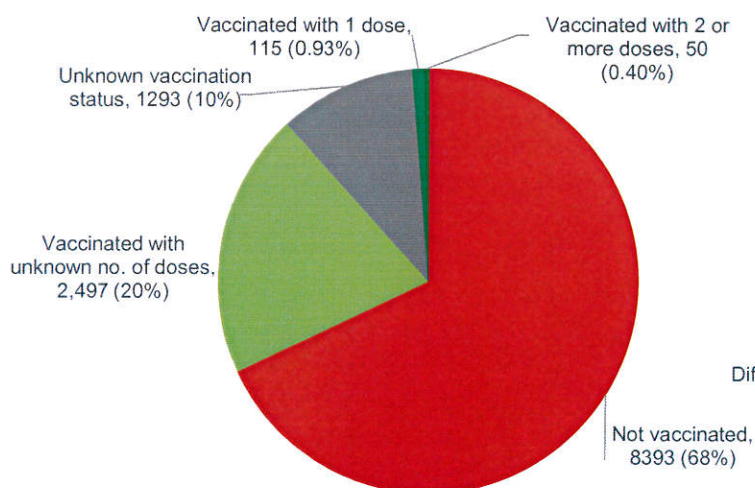
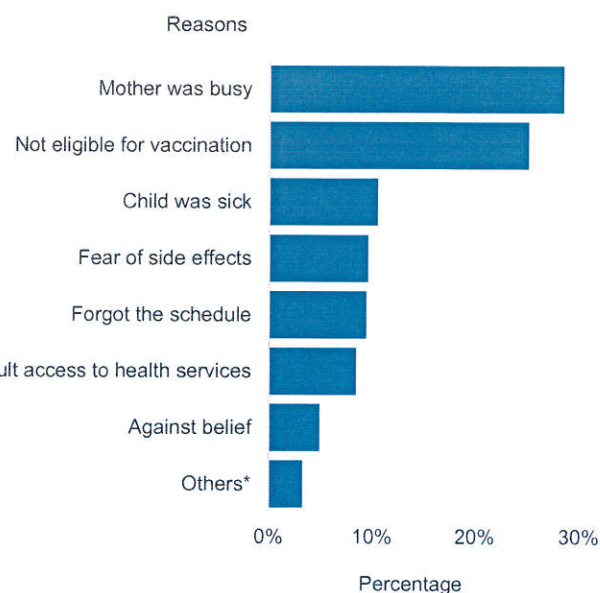


Figure 4. Reasons for Non-vaccination of Measles Vaccine*, Philippines, January 1 to July 28, 2018



*with data available

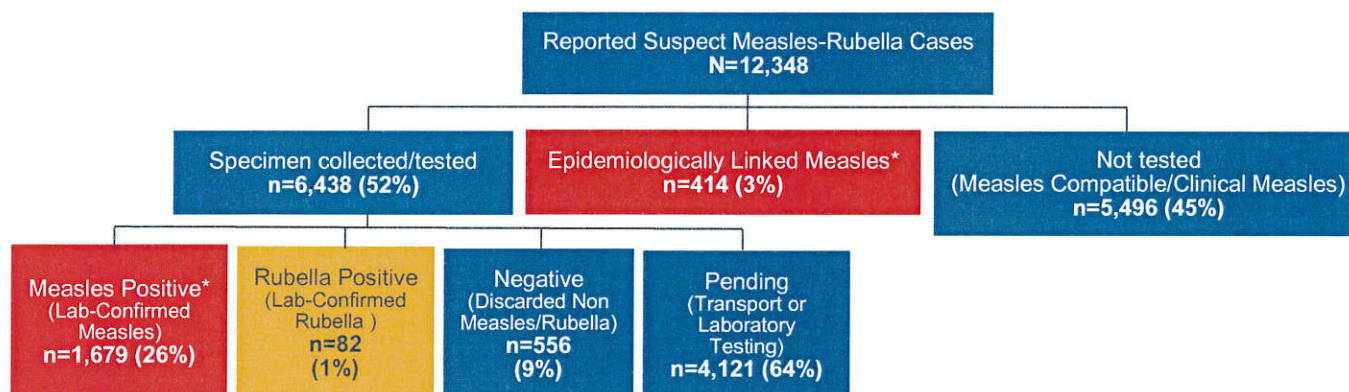
*other reasons: moves residence, lack of knowledge, parents refused, history of travel, child was abandoned, medical contraindication, war conflict



Case Classification

Among the 12,348 reported cases, a total of 6,438 (52%) cases had specimens collected/tested for measles/rubella IgM and/or PCR. Among the tested cases, 1,679 (26%) were positive for measles and 82 (1%) were positive for rubella. Four hundred fourteen (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 July 28, 2018, 2018 (N=12,348)



*Confirmed measles cases = laboratory-confirmed and epidemiologically-linked measles cases (N= 2,093)

Confirmed Measles Cases

Trend in the Philippines

There were 2,093 confirmed measles cases with 30 deaths (CFR=1.4%). The distribution of confirmed measles cases for 2018 compared to the 3-year average of cases from 2015-2017 is shown in Figure 6.

Geographic Distribution

Most of the confirmed measles cases were from the following regions: ARMM (436, 21%), NCR (347, 17%), Region XI (258, 12%), Region XII (226, 11%) and Region IX (202, 10%). Confirmed measles cases in 2018 increased by 4,657% compared to the same period in 2017 (Table 2).

Top 5 provinces with confirmed cases include: Lanao del Sur (277, 13%), Davao del Sur (175, 8%), Maguindanao (124, 6%), Zamboanga del Sur (112, 5%), and Negros Oriental (80, 4%)

Top 5 municipalities with confirmed cases include: Davao City (164, 8%), Manila (89, 4%), Zamboanga City (86, 4%), Cotabato City (84, 4%), and Taguig City (82, 4%).

Figure 6. Confirmed Measles Cases by Morbidity Week, Philippines, January 1 to July 28, 2018 (n=2,093)

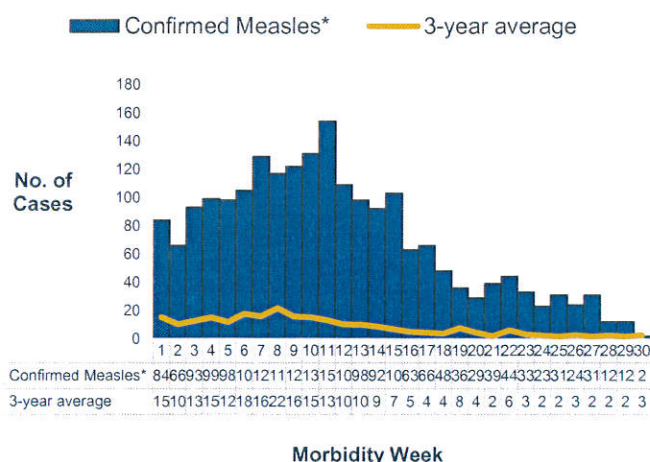


Table 2. Confirmed Measles Cases by Region, Philippines, January 1 to July 28, 2018 (n=2,093) vs. 2017 same time period

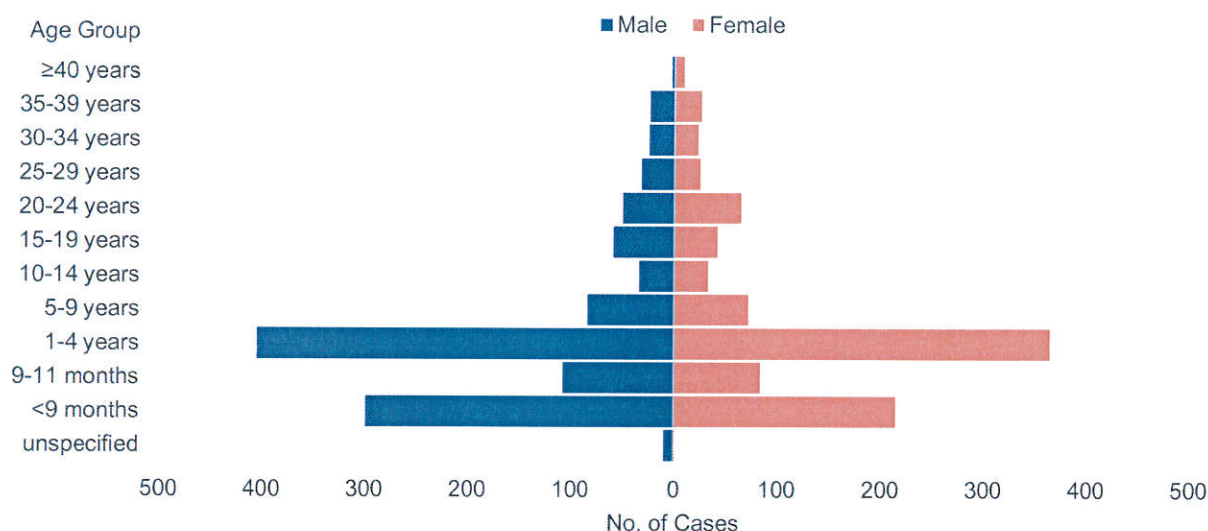
Region	2018		2017		Percent Change
	Cases	Deaths	Cases	Deaths	
PHL	2,093	30	44	1	↑ 4,657
I	24	0	3	0	↑ 700
II	5	0	0	0	-
III	97	3	5	1	↑ 1,840
IVA	96	1	7	0	↑ 1,271
MIMAROPA	3	0	0	0	-
V	39	1	0	0	-
VI	57	0	0	0	-
VII	104	0	1	0	↑ 10,300
VIII	8	1	0	0	-
IX	202	0	14	0	↑ 1,343
X	142	1	1	0	↑ 14,100
XI	258	8	1	0	↑ 25,700
XII	226	2	1	0	↑ 22,500
ARMM	436	2	6	0	↑ 7,167
CAR	10	0	0	0	-
CARAGA	39	0	1	0	↑ 3,800
NCR	347	11	4	0	↑ 8,575



Profile of Confirmed Measles Cases

Majority (1,133, 54%) of the confirmed measles cases were male. Ages of cases ranged from **less than 1 month to 46 years** old (median age of 2 years). Age groups with the most number of cases were: 1-4 years old (770, 37%), less than 9 months old (514, 25%) and 9-11 months old (192, 9%) (Figure 7).

Figure 7. Confirmed Measles Cases by Age Group and Sex, Philippines, January 1 to July 28, 2018 (n=2,093)



Majority (1,509, 72%) of the confirmed measles cases were not vaccinated (Figure 8). Top reasons for non-vaccination of measles-containing vaccine among confirmed cases were: not eligible for vaccination (29%), mother was busy (21%) and child was sick (12%) (Figure 9).

Figure 8. Vaccination Status of Confirmed Measles Cases, Philippines, January 1 to July 28, 2018 (n=2,093)

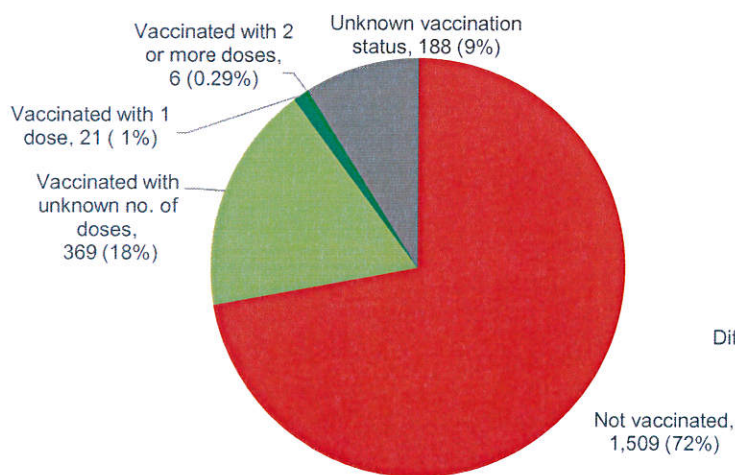
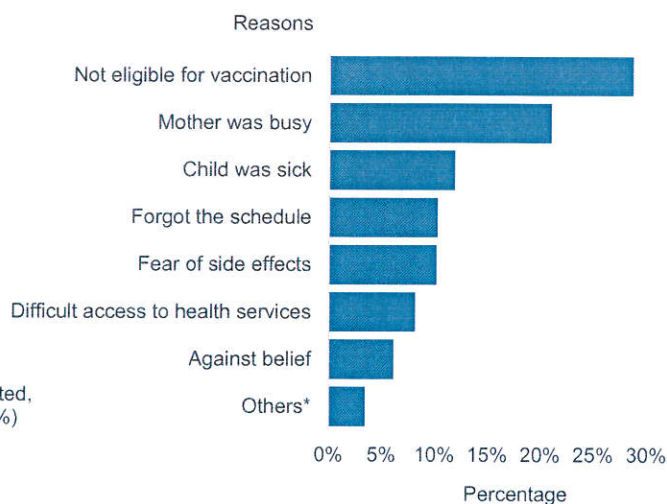


Figure 9. Reasons for Non-vaccination of Measles Vaccine among Confirmed Measles Cases*, Philippines, January 1 to July 28, 2018



*with available data

*other reasons: moves residence, war conflict, parents refused, lack of knowledge, history of travel, medical contraindication, child was abandoned

Profile of Confirmed Measles Deaths

There were 30 deaths (CFR=1.4%) out of the 2,093 confirmed measles cases. Ages of deaths ranged from **3 months to 24 years** old (median age of 9 months). Age groups of these deaths were: less than 9 months old (14, 47%), 1-4 years old (9, 30%) 9-11 months old (6, 20%), and 20-24 years old (1, 3%). Most (19, 63%) of the deaths had pneumonia complications. All died in the hospital with 0 to 28 days (median hospital days of 3 days) interval from date of admission to date of death.



Confirmed Rubella Cases

Trend in the Philippines

There were 82 confirmed rubella cases from January 1 to July 28, 2018. The distribution of confirmed rubella cases for 2018 compared to the 3-year average of cases from 2015-2017 is shown in Figure 10.

Geographic Distribution

Most of the confirmed rubella cases were from the following regions: Region XI (18, 22%), Region IVA (13, 16%), Region XII (10, 12%), Region VI (7, 9%) and NCR (7, 9%). Confirmed rubella cases in 2018 is 78% lower compared to the same time period in 2017 (371). No deaths were reported (Table 3).

Figure 10. Confirmed Rubella Cases by Morbidity Week, Philippines, January 1 to July 28, 2018 (n=82)

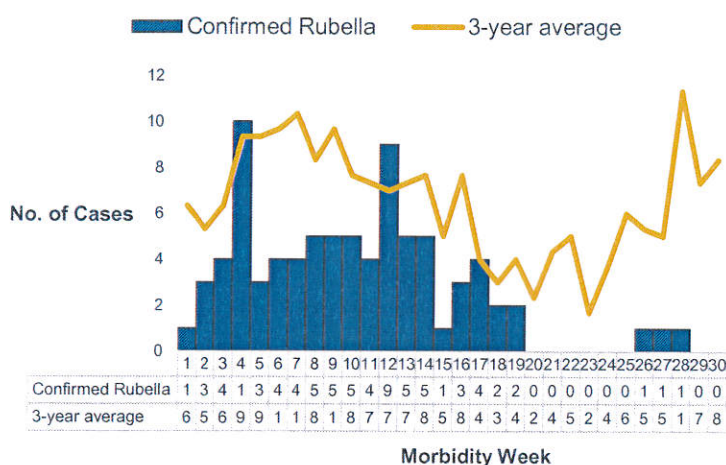


Table 3. Confirmed Rubella Cases by Region, Philippines, January 1 to July 28, 2018 (n=82) vs. 2017 same time period

Region	2018		2017		Percent Change
	Cases	Deaths	Cases	Deaths	
PHL	82	0	371	0	↓ 78
I	5	0	30	0	↓ 83
II	2	0	4	0	↓ 50
III	4	0	36	0	↓ 89
IVA	13	0	83	0	↓ 84
MIMAROPA	1	0	1	0	0
V	0	0	3	0	↓ 100
VI	7	0	71	0	↓ 90
VII	3	0	4	0	↓ 25
VIII	1	0	40	0	↓ 98
IX	3	0	3	0	0
X	3	0	6	0	↓ 50
XI	18	0	4	0	↑ 350
XII	10	0	2	0	↑ 400
ARMM	1	0	1	0	0
CAR	2	0	53	0	↓ 96
CARAGA	2	0	0	0	-
NCR	7	0	30	0	↓ 77

Profile of Confirmed Rubella Cases

Majority (45, 55%) of the confirmed rubella cases were male. Ages of cases ranged from **less than 1 month to 63 years** old (median age of 16 years). Age groups with the most number of cases were: 1-4 years old (19, 23%), 15-19 years old (18, 22%), 9-11 months old and 25-29 years old (9, 11% each) (Figure 11).

Majority (44, 54%) of the confirmed rubella cases were vaccinated but with unknown number of doses. Only 2 cases (2%) 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 28, 2018 (n=82)

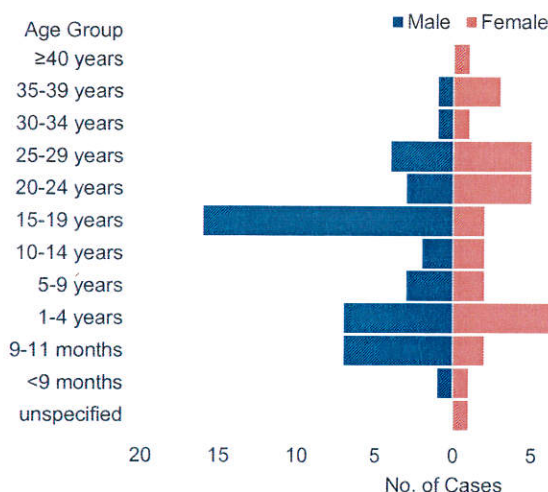
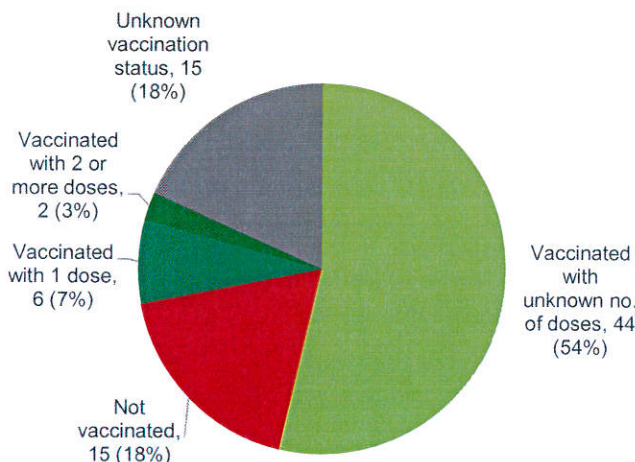


Figure 12. Vaccination Status of Confirmed Rubella Cases, Philippines, January 1 to July 28, 2018 (n=82)



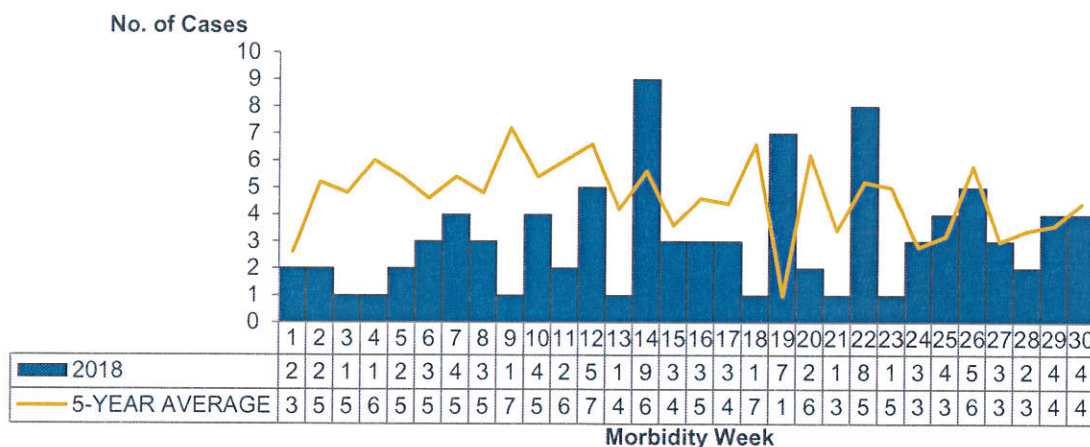


II. DIPHTHERIA

Trend in the Philippines

A total of **94** diphtheria cases were reported nationwide from January – July 2018. The distribution of diphtheria cases for 2018 compared to the 5-year average of cases from 2013 to 2017 is shown below (Figure 13).

Figure 13. Reported Diphtheria Cases by Morbidity Week, Philippines, January to July 2018 (N=94)



Geographic Distribution

There has been a **18%** decrease of diphtheria cases from 114 cases in 2017 to 94 cases in 2018, same time period. Most of the reported diphtheria cases came from NCR (37, 39%) followed by Region 4A (19, 20%) and Region 3 (12, 13%) (Table 5). Thirty two (34%) cases were confirmed out of the reported cases. There were six diphtheria clusters identified as of July 2018. A cluster is defined as two (2) or more diphtheria cases from the same barangay reported within four (4) consecutive weeks (Annex A).

Table 5. Reported Diphtheria Cases by Region, Philippines, January to July 2018 (N=94) vs. 2017 same time period*

REGION	2018		2017		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	94	22	114	30	↓18
I	1	1	2	0	↓50
II	0	0	1	1	↓100
III	12	2	12	3	0
IVA	19	4	13	4	↑46
MIMAROPA	0	0	1	1	↓100
V	5	2	1	1	↑400
VI	1	0	6	2	↓83
VII	2	0	0	0	-
VIII	1	0	0	0	-
IX	1	1	19	6	↓95
X	0	0	1	0	↓100
XI	2	1	3	2	↓33
XII	0	0	0	0	-
ARMM	10	3	5	1	↑100
CAR	0	0	4	0	↓100
CARAGA	3	0	0	0	-
NCR	37	8	46	9	↓20

*From the period of January 1 to July 28, 2018

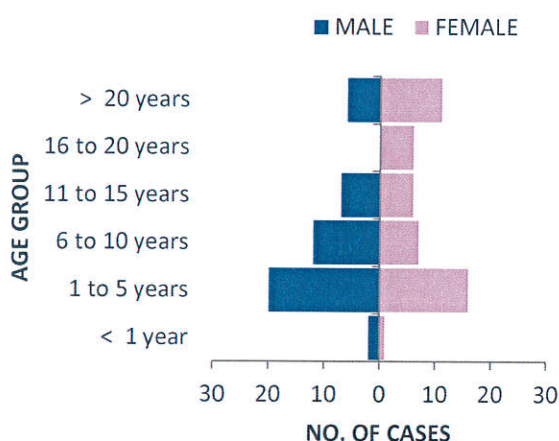


Profile of Cases

A. Suspect cases

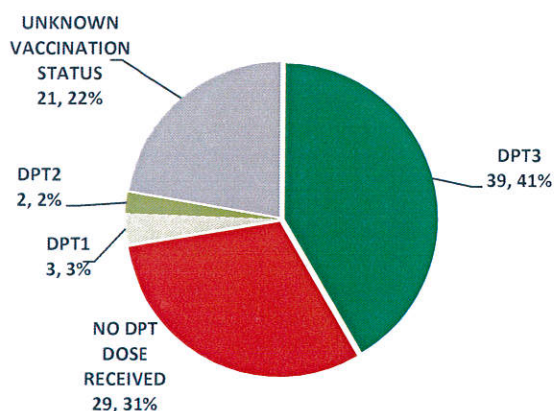
There were **47 males (50%)** and **47 females (50%)** among the reported diphtheria cases. Age of cases ranged from **2 months to 65 years old** (median age of 8 years). Age groups with the most number of cases were **1 - 5 years old (36, 38%)**, followed by 6-10 years old (19, 20%) and more than 20 years old (17, 18%) (Figure 14).

Figure 14. Suspect Diphtheria Cases by Age Group and Sex, Philippines, January to July 2018 (N=94)



Vaccination status showed that majority (**39,41%**) of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. Twenty nine (31%) did not receive a dose of the DPT/Pentavalent vaccine, 21 (22%) had unknown vaccination status, 3 (3%) had received 1 dose while 2 (2%) received only 2 doses of the vaccine (Figure 15).

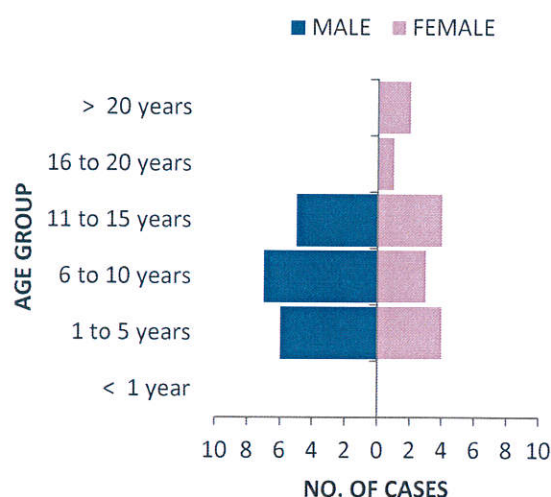
Figure 15. Reported Diphtheria Cases by DPT Dose Received, Philippines, January to July 2018 (N=94)



B. Confirmed cases

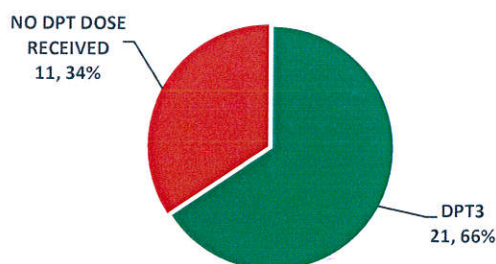
There were **32 (94%) confirmed diphtheria cases**. **14 cases were females (44%)** and **18 (56%) were males**. Age of cases ranged from 1 to 23 years old (median age of 8 years). Age groups with the most number of cases were **1-5 years (10, 31%)** and **6-10 years (10, 31%)** (Figure 16).

Figure 16. Confirmed Diphtheria Cases by Age Group and Sex, Philippines, January to July 2018 (n=32)



Majority (21,66%) of the confirmed cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine while eleven (11) or 34% did not receive a dose of the DPT/Pentavalent vaccine (Figure 17).

Figure 17. Confirmed Diphtheria Cases by DPT Dose Received, Philippines, January to July 2018 (n=32)



Profile of Confirmed Diphtheria Deaths

There were 7 deaths (CFR=22%) among the 32 confirmed diphtheria cases. Age of deaths ranged from **1 year to 8 years old** (median age of 4 years). Deaths came from the following age groups : 1-5 years old (4, 57%) and 6-10 years (3, 43%). Majority (4, 57%) did not receive a dose of the DPT/ Pentavalent vaccine while 3 (43%) received complete 3 primary doses of the vaccine.

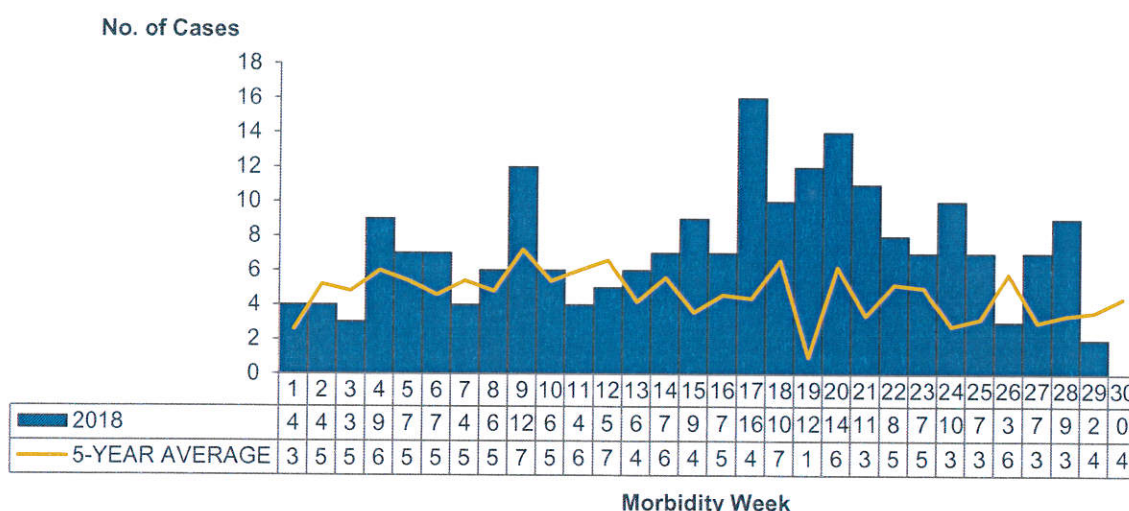


III. PERTUSSIS

Trend in the Philippines

A total of **216** pertussis cases were reported nationwide from January to July 2018. The distribution of pertussis cases for 2018 compared to the 5-year average of cases from 2013 to 2017 is shown below (Figure 18).

Figure 18. Reported Pertussis Cases by Morbidity Week, Philippines, January to July 2018 (N=216)



Geographic Distribution

There has been a **5%** increase of reported pertussis cases from 205 cases in 2017 to 216 cases in 2018, same time period. Majority of the reported pertussis cases came from NCR (54, 25%) followed by Region IVA (31, 14%) and Region XI (29, 13%) (Table 6). Sixty six (31%) cases were confirmed out of 216 cases. Thirteen pertussis clusters were identified as of July 2018. A cluster is defined as two (2) or more pertussis cases from the same barangay reported within four (4) consecutive weeks (Annex B).

Table 6. Reported Pertussis Cases by Region, Philippines, January to July 2018 (N=216) vs. 2017 same time period*

REGION	2018		2017		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	216	8	205	15	↑5
I	4	0	2	0	↑100
II	4	2	5	1	↓20
III	28	1	26	3	↑8
IVA	31	1	49	7	↓37
MIMAROPA	1	0	0	0	-
V	1	0	1	0	0
VI	4	0	2	0	↑100
VII	22	1	9	0	↑144
VIII	2	0	1	0	↑100
IX	1	0	2	0	↓50
X	3	0	7	0	↓57
XI	29	2	27	1	↑7
XII	1	0	4	0	↓75
ARMM	2	0	3	0	↓33
CAR	23	1	4	0	↑475
CARAGA	6	0	6	0	0
NCR	54	0	57	3	↓5

*From the period of January 1 to July 28, 2018

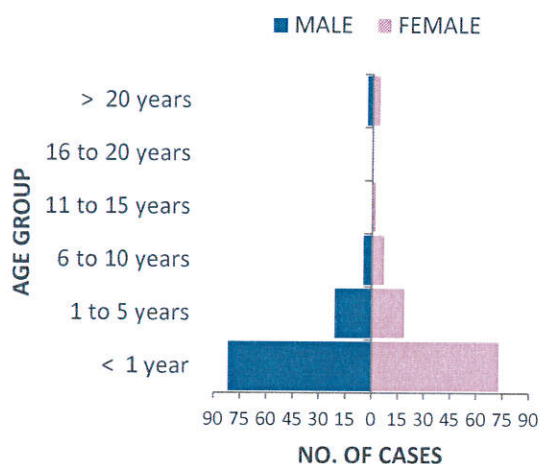


Profile of Cases

A. Suspect cases

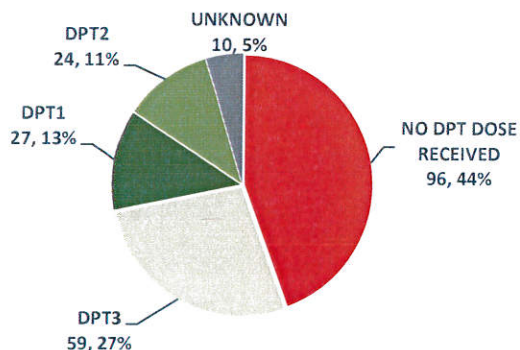
There were 111 (51%) males and 105 (49%) females among the reported pertussis cases. Age of cases ranged from 9 days to 77 years old (median age of 4 months). Age groups with most number of cases were **less than 1 year** (155, 72%), followed by those from the 1 to 5 years (40, 19%), and 6 to 10 years old (12, 6%) group (Figure 19).

Figure 19. Reported Pertussis Cases by Age Group and Sex, Philippines, January to July 2018 (N=216)



Majority of the reported cases (96, 44%) were **not vaccinated** with the DPT/pentavalent vaccine. Fifty nine cases (27%) received 3 primary doses, 27 (13%) received only 1 dose, 24 (11%) received only 2 doses while the remaining 10 cases (5%) had unknown vaccination status (Figure 20).

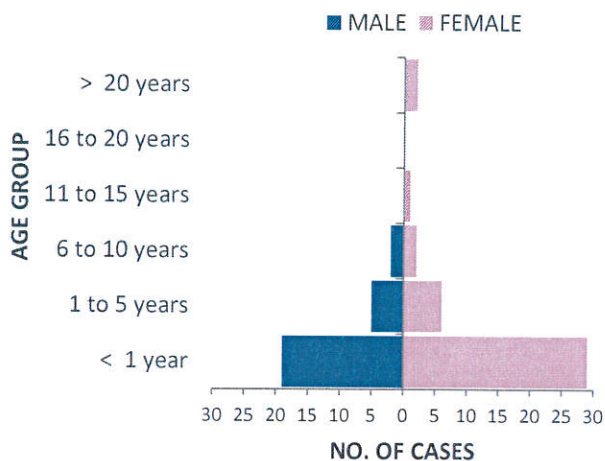
Figure 20. Reported Pertussis Cases by DPT Dose Received, Philippines, January to July 2018 (N=216)



B. Confirmed cases

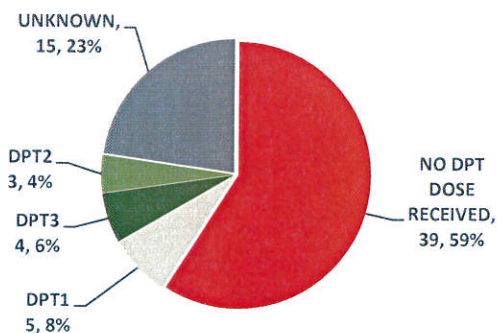
There were 66 (31%) confirmed pertussis cases. 14 cases were females (44%) and 18 (56%) were males. 40 cases (61%) were females and 26 (39%) were males. Age of cases ranged from 13 days to 34 years old (median age of 2 months). Age groups with the most number of cases were **less than 1 year** (48, 73%), followed by those 1 to 5 years (11, 17%) and 6 to 10 years old (4, 6%) (Figure 21).

Figure 21. Confirmed Pertussis Cases by Age Group and Sex, Philippines, January to July 2018 (n=66)



Majority (39, 59%) of the confirmed cases were **not vaccinated** with the DPT/Pentavalent vaccine. Fifteen (15) or 23% had an unknown vaccinated status, 5 (8%) received 1 dose, 4 (6%) received complete 3 primary doses while the remaining 3 cases (5%) received only 2 doses. (Figure 22).

Figure 22. Confirmed Pertussis Cases by DPT Dose Received, Philippines, January to July 2018 (n=66)



Profile of Confirmed Pertussis Deaths

There were 5 deaths (CFR=8%) among the 66 confirmed pertussis cases. Ages of deaths ranged from 1 month to 4 years old (median age of 2 months). Deaths came from the following age groups: less than 1 year (3, 60%) and 1 – 5 years (2, 40%). Four (80%) of the confirmed pertussis deaths did not receive any dose of the DPT/pentavalent vaccine while 1(20%) had unknown vaccination status.

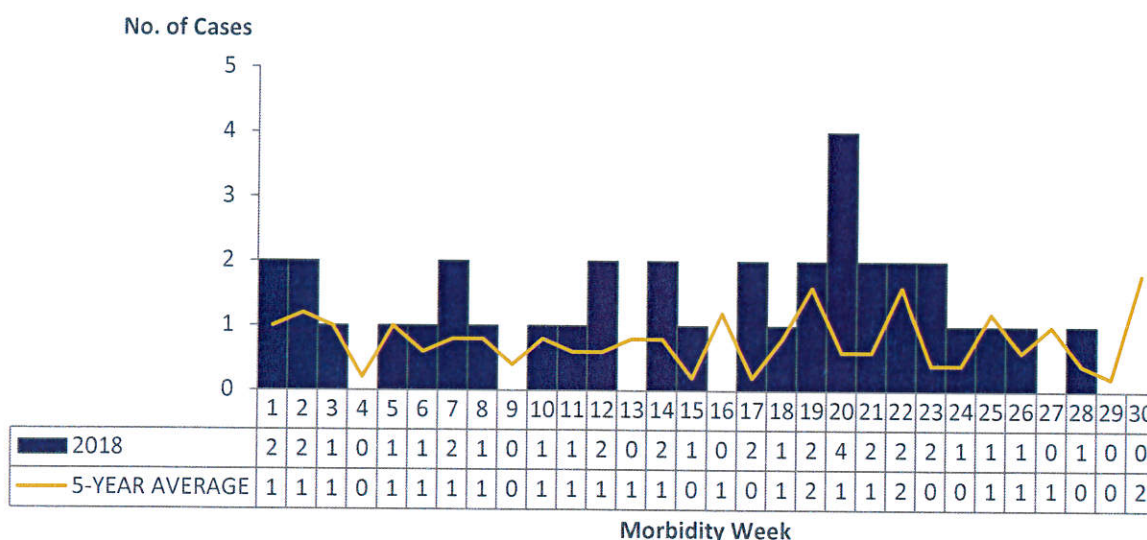


IV. NEONATAL TETANUS

Trend in the Philippines

A total of **thirty six (36)** clinically confirmed neonatal tetanus (NT) cases were reported nationwide from January – July 2018. The distribution of neonatal tetanus cases for 2018 compared to the 5-year average of cases from 2013 to 2017 is shown below (Figure 23).

Figure 23. Neonatal Tetanus Cases by Morbidity Week, Philippines, January to July 2018 (N=36)



Geographic Distribution

There has been a **36%** decrease of reported neonatal tetanus cases from 56 cases in 2017 to 36 cases in 2018, same time period. **ARMM** reported the most number of cases (**13, 36%**), followed by Region XII with 8 cases (22%) (Table 7).

Table 7. Neonatal Tetanus Cases by Region, Philippines, January to July 2018 (N=36) vs. 2017 same time period*

REGION	2018		2017		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
PHILIPPINES	36	20	56	36	↓36
I	1	0	0	0	-
II	1	0	2	2	↓50
III	1	1	3	2	↓67
IVA	2	2	3	1	↓33
MIMAROPA	0	0	8	6	↓100
V	0	0	2	2	↓100
VI	1	1	2	1	↓50
VII	0	0	2	2	↓100
VIII	2	1	2	2	0
IX	3	2	1	1	↑200
X	2	0	2	0	0
XI	0	0	0	0	-
XII	8	4	10	6	↓20
ARMM	13	8	15	8	↓13
CAR	0	0	0	0	-
CARAGA	1	1	2	2	↓50
NCR	1	0	2	1	↓50

*From the period of January 1 to July 28, 2018

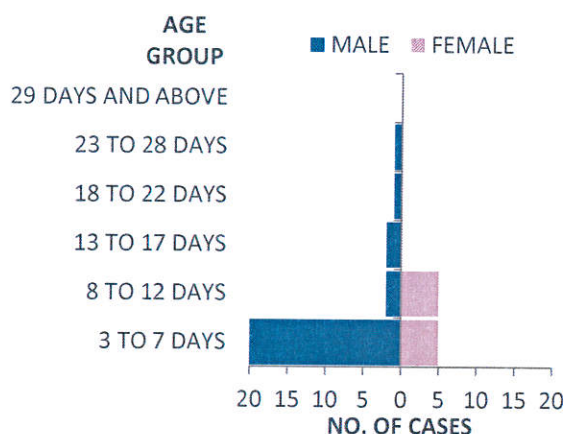


Profile of Cases

A. Age group and Sex

Twenty six (26) clinically-confirmed cases (72%) were male. Age of the cases ranged from 3 to 24 days old (median age of 6 days). More than half of the cases were from the 3 to 7 day age group (25, 69 %), followed by cases 8 to 12 days old (7, 19%) (Figure 24).

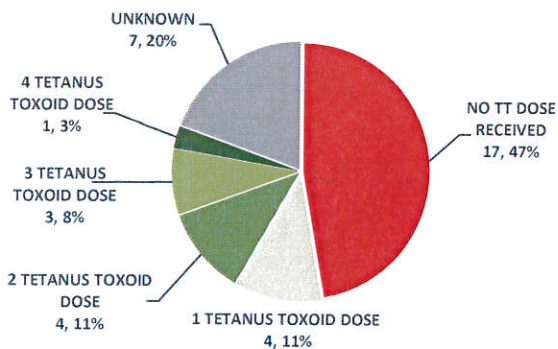
Figure 24. Clinically Confirmed Neonatal Tetanus Cases by Age Group and Sex, Philippines, January to July 2018 (N=36)



B. Vaccination Status

Most (17, 47%) of the mothers of clinically confirmed cases **did not receive any dose of the tetanus toxoid vaccine**, followed by those with unknown vaccination status (7, 20%). Four (11%) received only 1 dose, 4 (11%) received 2 doses, 3 (8%) received 3 doses while the remaining 1 (3%) case received 4 doses (Figure 25).

Figure 25. Clinically Confirmed Neonatal Tetanus Cases by Vaccination Status, Philippines, January to July 2018 (N=36)



C. Delivery Practices among Clinically Confirmed Neonatal Tetanus Cases

In terms of delivery practices, thirty two (89%) of the neonatal tetanus cases were delivered at home. Twenty six (72%) of the cases were attended by a hilot. Thirteen (36%) cases had scissors as the common cord cutting tool used. Umbilical stump treatment of majority of the NT cases was alcohol (19, 53%) (Table 8).

Table 8. Delivery Practices of Clinically Confirmed Neonatal Tetanus Cases, Philippines, January to July 2018 (N=36)

Delivery Practices	No. of Cases	Percentage
Place of Delivery		
Home	32	89%
Hospital/Lying-In/Clinic	2	6%
Road	1	3%
Tricycle	1	3%
Delivery Attendant		
Hilot	26	72%
Midwife	3	8%
Unknown	3	8%
Lay person	3	8%
Nurse	1	4%
Cord Cut Tool Used		
Scissors	13	36%
Blade	11	31%
Bamboo	8	22%
Unknown	4	11%
Stump Treatment Used		
Alcohol	19	53%
Unknown	11	31%
None	3	8%
Cooking Oil	1	3%
Powder	1	3%
Water	1	3%

Profile of Neonatal Tetanus Deaths

There were 20 deaths (CFR=56%) among the 36 neonatal tetanus cases. Ages of deaths ranged from 3 days to 18 days old (median age of 6 days). Deaths came from the following age groups : 3-7 days old (13, 65%), 8 – 12 days (4, 20%) and 13-17 days (2, 10%). Majority (12, 60%) did not receive a dose of the tetanus toxoid vaccine. Four (20%) had unknown vaccination status, 2 (10%) received 2 doses while those that received 1 dose, and 3 doses had 1 case each (5%).



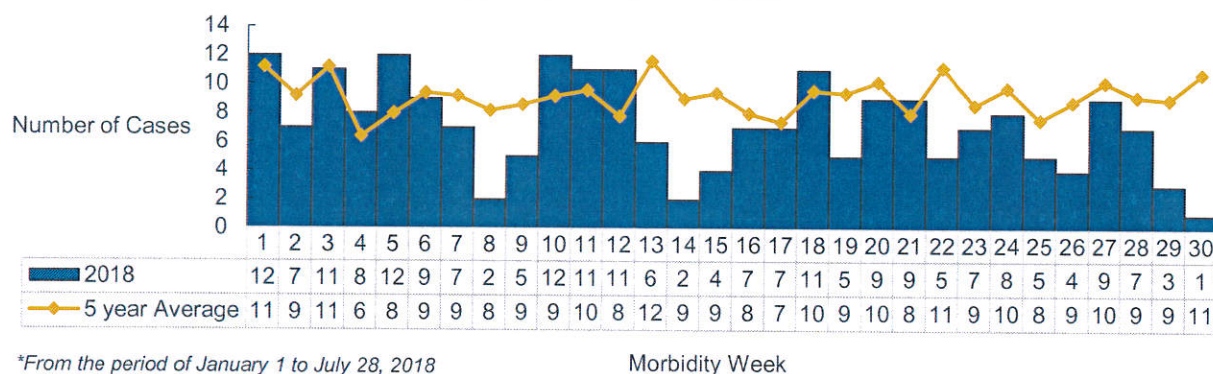
V. ACUTE FLACCID PARALYSIS

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 **216 AFP** cases were reported nationwide from January to July 2018. The distribution of AFP cases for 2018 compared to the 5-year average of cases from 2013 to 2017 is shown below (Figure 26).

Figure 26. Trend of Reported AFP Cases (N=216)
Philippines, January to July 2018*



*From the period of January 1 to July 28, 2018

Morbidity Week

Geographic Distribution

A total of 216 AFP cases were reported from January to July 2018; while 256 AFP cases were reported during the same time period last year. Among the 216 reported AFP cases, 135 (63%) were discarded as non-polio AFP, while 51 (24%) are still pending for 60 day follow-up, expert panel review and for official laboratory result. There were 30 (14%) reported cases that did not fit the case definition and were classified as not AFP. For this period, the non-polio AFP rate* is 0.80 which nearly reached the target indicator of 1/100,00 children under 15 years old (Table 9).

Table 9. Reported AFP Cases by Region and Classification
January to July 2018 vs. 2017 same time period*

Region	2018					2017	
	No. of Cases (A)	Discarded as non-polio (B)	Pending (C)	Not AFP (D)	Non-polio AFP Rate (E)	No. of Cases (F)	Non-polio AFP Rate (G)
PHL	216	135 (62.50%)	51 (23.61%)	30 (13.89%)	0.80	256	1.54
I	11	7	2	2	0.88	32	3.30
II	4	3	1	0	0.55	15	2.00
III	28	17	9	2	0.94	29	1.81
IVA	35	17	8	10	0.72	32	1.39
MIMAROPA	2	1	1	0	0.18	3	0.67
V	19	13	5	1	1.18	18	1.50
VI	24	19	5	0	1.58	22	2.78
VII	8	6	1	1	0.48	9	0.67
VIII	12	7	2	3	0.88	12	0.89
IX	8	8	0	0	1.23	3	0.93
X	8	2	0	6	0.24	19	1.67
XI	8	5	2	1	0.59	21	2.10
XII	9	8	1	0	1.00	6	1.89
ARMM	4	2	2	0	0.24	4	0.53
CAR	9	8	1	0	2.67	7	1.71
CARAGA	2	1	1	0	0.22	5	0.91
NCR	25	11	10	4	0.59	19	1.27

Note: *Non-polio AFP Rate is an indicator which measures the sensitivity of surveillance. To meet the minimum level for a polio-free certification, at least one case of non-polio AFP should be detected annually per 100,000 population aged less than 15 years (1/100,000 of children under 15 years old). In endemic regions, to ensure even higher sensitivity, this rate should be two per 100,000. Cases classified as NOT AFP are excluded from the non-polio AFP rate computation.

Legend:
■ Reached or surpassed target
■ Nearly reached target: 0.5-0.99 for non-polio AFP rate
■ Substantially below target: 0-0.49

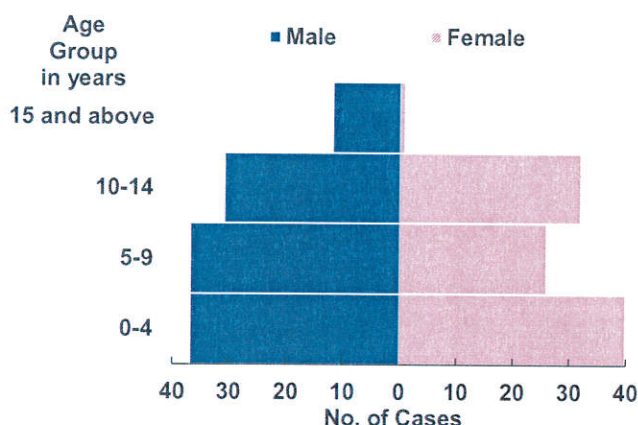


Profile of Cases

A. Age group and Sex

One hundred seventeen (117,54%) are males. Age ranges from < 1 month to 55 years (median age of 7 years old). Seventy-seven (77,36%) of the AFP cases reported belong to 0-4 age group (Figure 27).

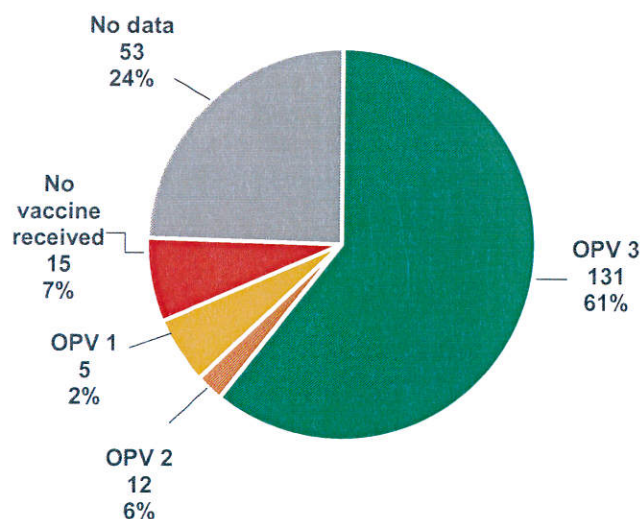
Figure 27. AFP Cases by Sex and Age Group (N=216)
Philippines, January to July 2018



B. Vaccination Status

Among the 216 reported AFP cases, 131 (61%) completed 3 doses of OPV. Fifty-three (24%) had no data (Figure 28).

Figure 28. Vaccination Status of AFP Cases (N=216)
Philippines, January to July 2018



C. Laboratory Status

There were no isolated wild or vaccine-derived poliovirus from January 1 to July 28. Stool 1 was collected in 189 (88%) AFP cases and stool 2 in 168 (78%) of AFP cases. Two cases had poliovirus Sabin-like type 1 and 3 isolated (Table 10).

Table 10. Laboratory Status of Reported AFP Cases (N=216)
Philippines, January to July 2018

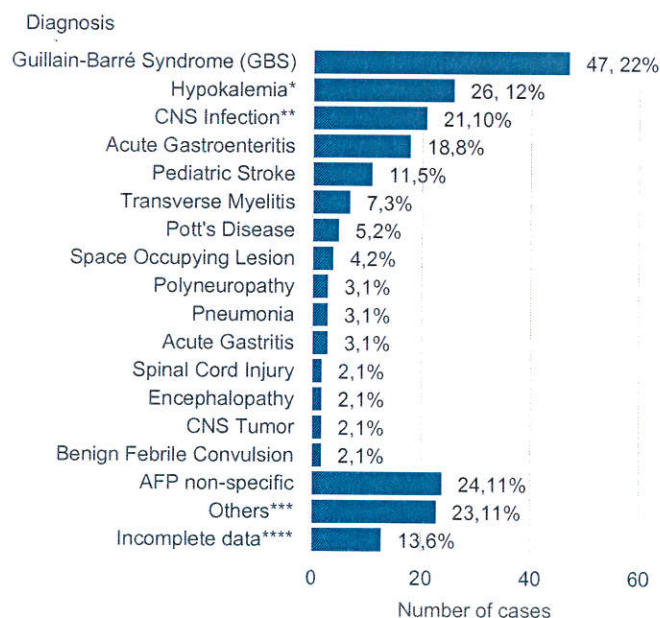
Stool Specimen Result	Stool Specimen 1		Stool Specimen 2	
Total	189	88%	168	78%
Negative for poliovirus	166	88%	151	90%
Others				
Poliovirus (Sabin-Like)*	2	1%	2	1%
Non-polio enterovirus (NPEV)	8	4%	6	4%
Pending Lab Results	13	7%	9	5%

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

D. Differential Diagnosis

The top diagnosis among AFP cases reported were Guillain Barre Syndrome or GBS (47,22%), Hypokalemia** (26,12%) and CNS Infection* (21,10%) (Figure 29).

Figure 29. AFP Cases by Differential Diagnosis (N=216)
Philippines, January to July 2018



*Includes Hypokalemic Periodic Paralysis and Electrolyte Imbalance

**Includes Bacterial Meningitis, TB Meningitis, Aseptic Meningitis

***Others : Acute Infarction, Acute Lower Motor Neuron Disease, Acute Tenosynovitis, Cardiac Arrhythmia, Cerebellar Ataxia, Epilepsy, Ileus, Azotemia, Suspect Leptospirosis, Lower Motor Weakness, Malnutrition, Rheumatic Fever, Juvenile Rheumatoid Arthritis, SVI, TB Arthritis, Urinary Retention, UTI, Viral Myositis

****For verification



ANNEX A. CLUSTER OF DIPHTHERIA CASES

MORBIDITY WEEK	REGION	PROVINCE	MUNCITY	BARANGAY	CASES	
					CONFIRMED	SUSPECT
14	4A	CAVITE	DASMARIÑAS	LUZVIMINDA I	0	2
14-15	NCR	METRO MANILA	MANILA	BARANGAY 533	2	0
16-17	NCR	METRO MANILA	CALOOCAN CITY	BARANGAY 166	2	0
17-19	ARMM	BASILAN	MALUSO	TOWNSITE (POB.)	0	3
25-26	5	ALBAY	LEGAZPI CITY	BGY. 53 - BONGA (BGY. 48)	0	2
30	NCR	METRO MANILA	QUEZON CITY	GULOD	2	1

ANNEX B. CLUSTER OF PERTUSSIS CASES

MORBIDITY WEEK	REGION	PROVINCE	MUNCITY	BARANGAY	CASES	
					CONFIRMED	SUSPECT
7-10	2	CAGAYAN	BALLESTEROS	FUGU	1	1
15-19	CAR	BENGUET	ITOGON	LOACAN	6	5
16-17	CAR	BENGUET	BOKOD	DACLAN	1	1
16-18	NCR	METRO MANILA	QUEZON CITY	COMMONWEALTH	1	2
18-20	8	LEYTE	PASTRANA	CALSADAHAY	0	2
19-22	NCR	METRO MANILA	QUEZON CITY	TATALON	0	2
19-22	CAR	BAGUIO	BAGUIO CITY	BAKAKENG CENTRAL	3	0
20	NCR	METRO MANILA	QUEZON CITY	HOLY SPIRIT	0	2
20	11	DAVAO DEL SUR	DAVAO CITY	BARANGAY 23-C (POB.)	0	2
22-23	CAR	BENGUET	LA TRINIDAD	BALILI	2	0
23	3	PAMPANGA	ANGELES CITY	CUTCUT	0	2
24-27	11	DAVAO DEL SUR	DAVAO CITY	TALOMO (POB.)	0	3
24	CAR	APAYAO	LUNA	CALABIGAN	2	0