



## 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 February 23, 2019 or Morbidity Weeks 1 - 8 (Table 1).

**Table 1. Summary of Reported Vaccine Preventable Diseases, Philippines, January 1 – February 23, 2019**

Vaccine Preventable Diseases	Total No of Cases	Confirmed Cases		
		Cases	Deaths	CFR %
Measles	12, 750	12,692	207	1.63
Rubella		8	0	-
Diphtheria	25	2	1	50
Pertussis	17	2	1	50
Neonatal Tetanus	4	4	2	50
Polio (AFP Surveillance)	18	-	-	-

### 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"> <li>Any neonate (<math>\leq 28</math> 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</li> <li>A neonate between 3 to 28 days of life, diagnosed as a case of tetanus by a physician.</li> </ul>
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"> <li>- A case of acute cough illness of any duration with a positive culture for B. pertussis; OR</li> <li>- A case that meets the clinical case definition and is confirmed by PCR; OR</li> <li>- A case that meets the clinical definition and is epidemiologically linked directly to a case confirmed by either culture or PCR.</li> </ul>
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 <b>AFP "hotcase"</b> An AFP case with no or less than 3 OPV dose and had FEVER at onset of paralysis

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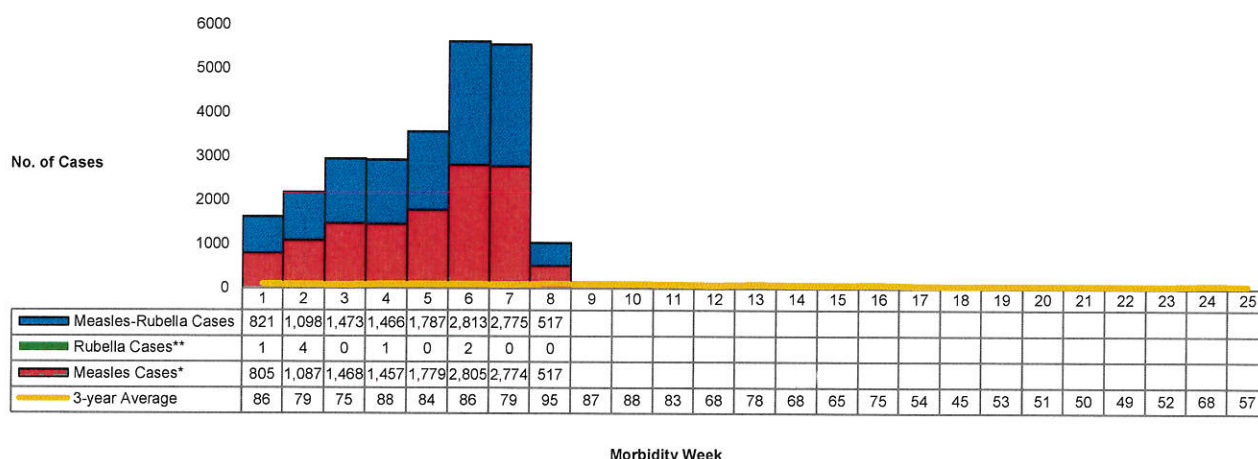
## I. MEASLES-RUBELLA

### Suspect Cases

#### Trend in the Philippines

A total of 12,750 suspect measles-rubella cases were reported from January 1 to February 23, 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 February 23, 2019 (N=12,750)**



\*Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, measles compatible, and pending  
\*\*Rubella Cases= laboratory-confirmed rubella and epidemiologically-linked confirmed rubella

#### Geographic Distribution

From January 1 to February 23, 2019 or morbidity weeks 1 to 8, cases are 318% higher than the number of cases reported during the same time period last year (3,050). Most of the reported cases were from the following regions: IVA (3,121, 24%), NCR (3,000, 24%), Region III (1,835, 14%), Region VI (633, 5%) and Region X (601, 5%) (Table 1). Majority of regions showed increase in the number of reported measles cases compared to 2018 except for Regions IX, XI, and ARMM.

**Table 1. Reported Measles-Rubella Cases by Region, Philippines, January 1 to February 23, 2019 (N=12,750) vs. January 1 to February 23, 2018**

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
<b>PHL</b>	<b>12,750</b>	<b>208</b>	<b>3,050</b>	<b>27</b>	<b>↑ 318</b>
<b>I</b>	388	8	68	0	↑ 471
<b>II</b>	106	1	10	0	↑ 960
<b>III</b>	1,835	25	59	2	↑ 3,010
<b>IVA</b>	3,121	68	79	1	↑ 3,851
<b>MIMAROPA</b>	475	6	13	0	↑ 3,554
<b>V</b>	280	4	7	0	↑ 3,900
<b>VI</b>	633	3	38	0	↑ 1,566
<b>VII</b>	444	6	30	0	↑ 1,380
<b>VIII</b>	577	18	6	0	↑ 9,517
<b>IX</b>	125	0	500	2	↓ 75
<b>X</b>	601	4	204	0	↑ 195
<b>XI</b>	212	3	603	11	↓ 65
<b>XII</b>	289	1	246	2	↑ 17
<b>ARMM</b>	275	3	1,008	6	↓ 73
<b>CAR</b>	157	0	18	0	↑ 772
<b>CARAGA</b>	232	0	29	1	↑ 700
<b>NCR</b>	3,000	58	132	2	↑ 2,173

\*Percentages may not equal to 100 due to rounding off of figures

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.

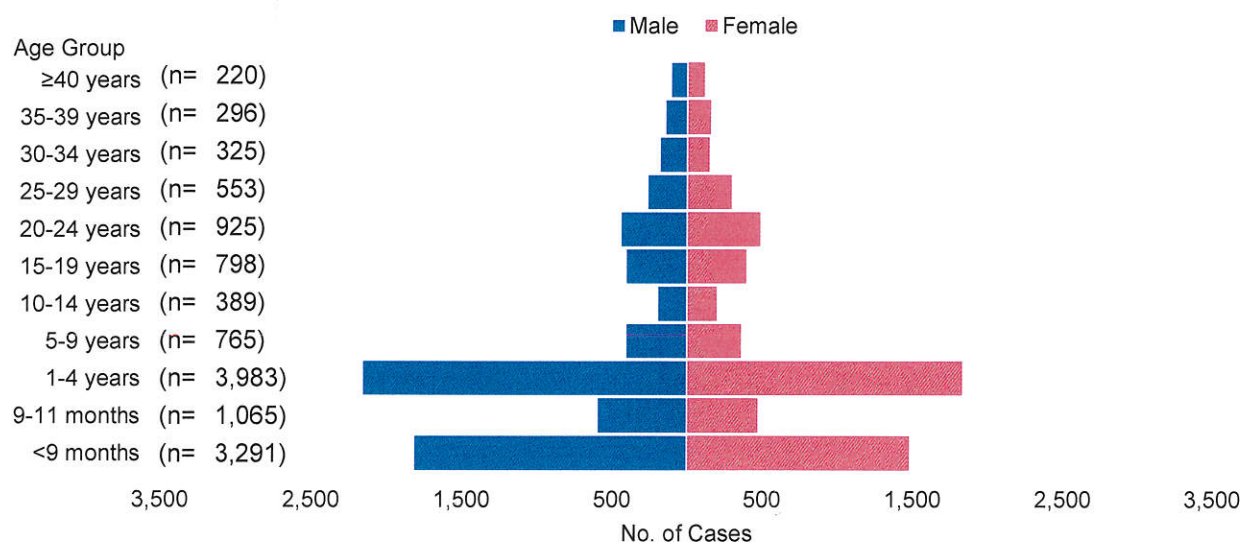
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### Profile of Reported Cases

Majority (6,763, 53%) of the reported cases were male. Ages of cases ranged from **less than 1 month to 88 years old** (median age of 2 years). Age groups with the most number of cases were: 1-4 years old (3,983, 31%), less than 9 months old (3,291, 26%) and 9-11 months old (1,065, 8%) (Figure 2).

**Figure 2. Reported Measles-Rubella Cases by Age Group and Sex, Philippines, January 1 to February 23, 2019 (N=12,750)\***

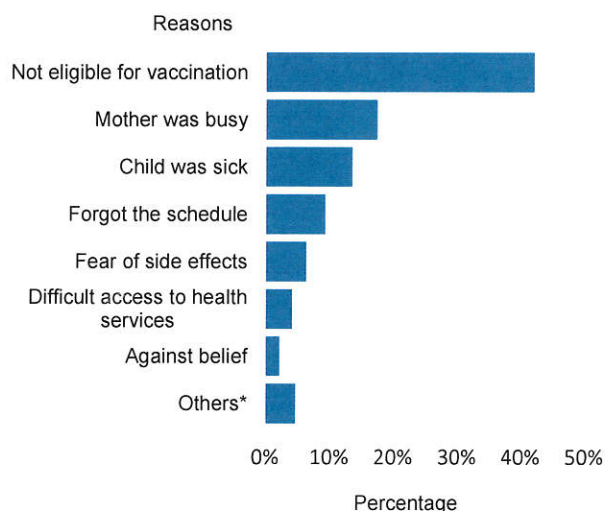
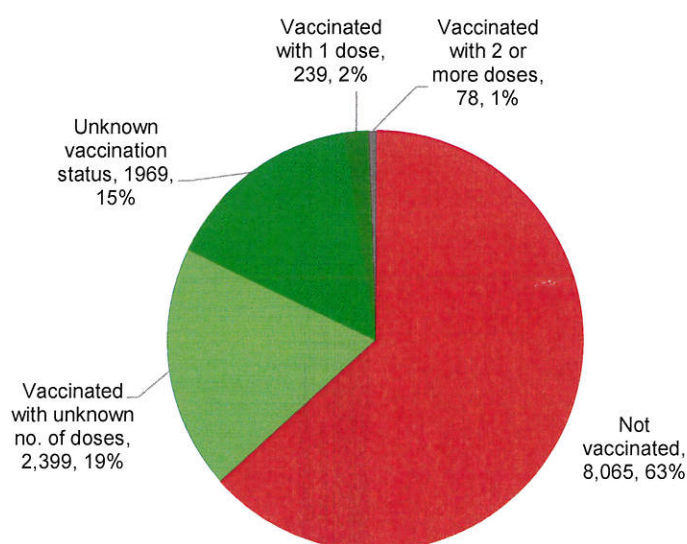


\*140 cases with unspecified age

Majority (8,065, 63%) of the cases were not vaccinated (Figure 3). Top reasons for non-vaccination of measles-containing vaccine were: not eligible for vaccination (42%), mother was busy (18%), and child was sick (14%) (Figure 4).

**Figure 3. Vaccination Status of Reported Measles-Rubella Cases, Philippines, January 1 to February 23, 2019 (N=12,750)**

**Figure 4. Reasons for Non-vaccination of Measles Vaccine\*, Philippines, January 1 to February 23, 2019**



\*with data available

\*other reasons: moves residence, lack of knowledge, history of travel, medical contraindication, refused vaccination, flood during immunization, received other vaccine, pregnant, mother was sick, and lost vaccination card

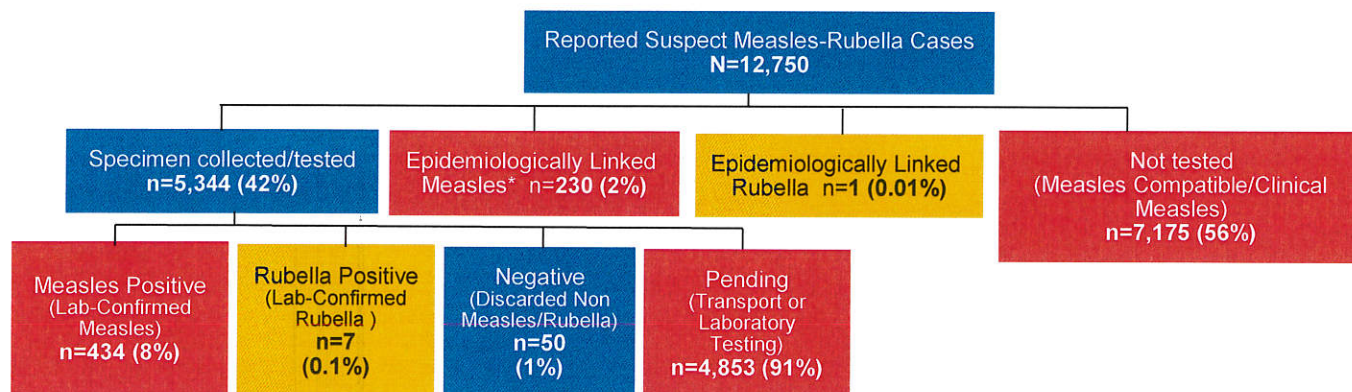




### Case Classification

Among the 12,750 reported cases, a total of 5,344 (42%) cases had specimens collected/tested for measles/rubella IgM and/or PCR. Among the tested cases, 434 (8%) were positive for measles and 7 (0.1%) were positive for rubella. Two hundred thirty (230, 2%) 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 February 23, 2019 (N=12,750)**



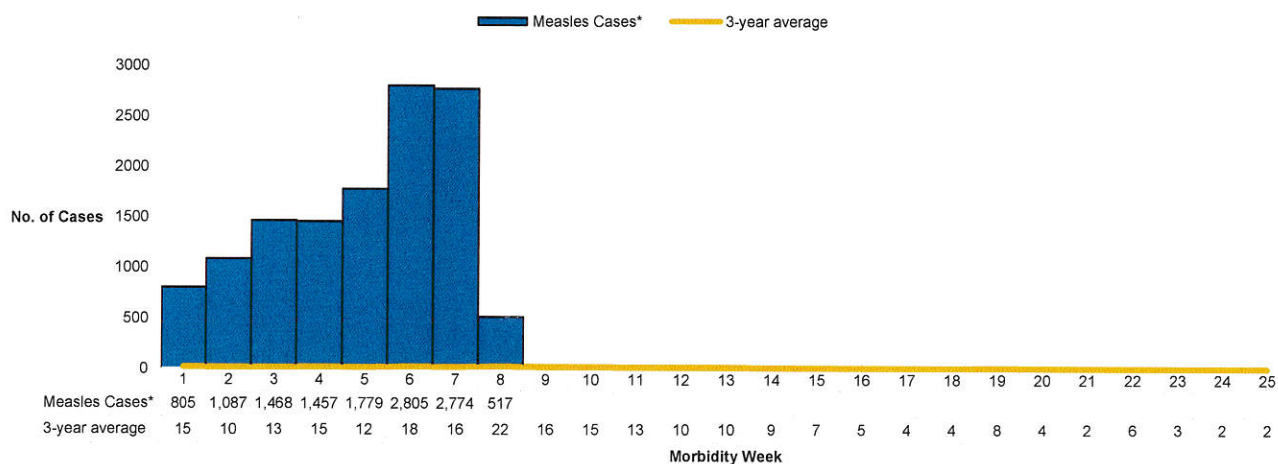
Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, measles compatible and pending (n=12,692)

### Measles Cases

#### Trend in the Philippines

There were 12,692 measles cases with 207 death (CFR=2%). 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 February 23, 2019 (n=12,692)**



\*Measles cases=laboratory-confirmed measles, epidemiologically-linked confirmed measles, measles compatible and pending (n=12,692)



### Geographic Distribution

Most of the measles cases were from the following regions: IVA (3,166, 25%), NCR (2,993, 24%), Region III (1,830, 14%), Region VI (622, 5%) and Region X (597, 5%). Measles cases in 2019 increase by 74% 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, and ARMM.

Top 5 provinces with measles cases include: Rizal (1,672, 13%), Bulacan (609, 5%), Laguna (438, 3%), Pampanga (415, 3%), and Cavite (392, 3%).

Top 5 municipalities with measles cases include: Quezon City (730, 6%), Antipolo City (713, 6%), Manila (662, 5%), Caloocan City (333, 3%) and Biñan (203, 2%).

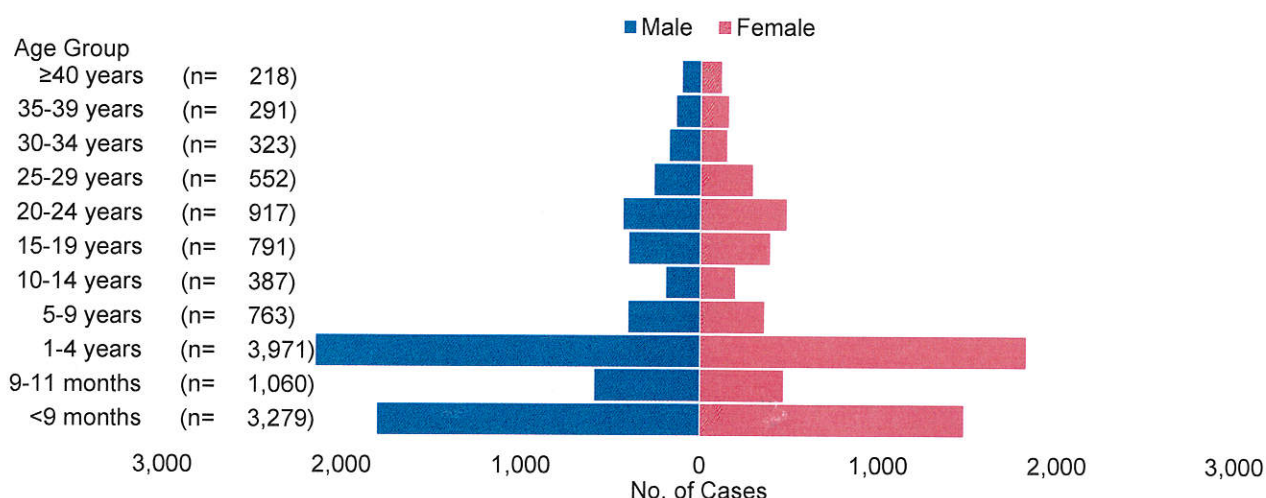
**Table 2. Measles Cases by Region,**  
**Philippines, January 1 to February 23, 2019 (n=12,692) vs. January 1 to February 23, 2018**

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
<b>PHL</b>	<b>12,692</b>	<b>207</b>	<b>2,838</b>	<b>26</b>	<b>↑ 347</b>
<b>I</b>	<b>381</b>	<b>8</b>	<b>50</b>	<b>0</b>	<b>↑ 662</b>
<b>II</b>	<b>103</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>↑ 1,617</b>
<b>III</b>	<b>1830</b>	<b>25</b>	<b>47</b>	<b>2</b>	<b>↑ 3,794</b>
<b>IVA</b>	<b>3116</b>	<b>68</b>	<b>51</b>	<b>1</b>	<b>↑ 6,010</b>
<b>MIMAROPA</b>	<b>475</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>↑ 5,838</b>
<b>V</b>	<b>276</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>↑ 6,800</b>
<b>VI</b>	<b>622</b>	<b>3</b>	<b>30</b>	<b>0</b>	<b>↑ 1,973</b>
<b>VII</b>	<b>437</b>	<b>6</b>	<b>22</b>	<b>0</b>	<b>↑ 1,886</b>
<b>VIII</b>	<b>577</b>	<b>18</b>	<b>4</b>	<b>0</b>	<b>↑ 14,325</b>
<b>IX</b>	<b>124</b>	<b>0</b>	<b>486</b>	<b>1</b>	<b>↓ 74</b>
<b>X</b>	<b>597</b>	<b>4</b>	<b>197</b>	<b>0</b>	<b>↑ 203</b>
<b>XI</b>	<b>211</b>	<b>3</b>	<b>555</b>	<b>11</b>	<b>↓ 62</b>
<b>XII</b>	<b>288</b>	<b>1</b>	<b>220</b>	<b>2</b>	<b>↑ 31</b>
<b>ARMM</b>	<b>275</b>	<b>3</b>	<b>1003</b>	<b>6</b>	<b>↓ 73</b>
<b>CAR</b>	<b>156</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>↑ 1,460</b>
<b>CARAGA</b>	<b>231</b>	<b>0</b>	<b>23</b>	<b>1</b>	<b>↑ 904</b>
<b>NCR</b>	<b>2993</b>	<b>57</b>	<b>122</b>	<b>2</b>	<b>↑ 2,353</b>

### Profile of Measles Cases

Majority (6,728, 53%) of the confirmed measles cases were male. Ages of cases ranged from **less than 1 month to 88 years** old (median age of 2 years). Age groups with the most number of cases were: 1-4 years old (3,971, 31%), less than 9 months old (3,279, 26%), and 9-11 months old (1,060, 8%) (Figure 7).

**Figure 7. Measles Cases by Age Group and Sex,**  
**Philippines, January 1 to February 23, 2019 (n=12,692)\***



Percentages may not equal to 100 due to rounding off of figures

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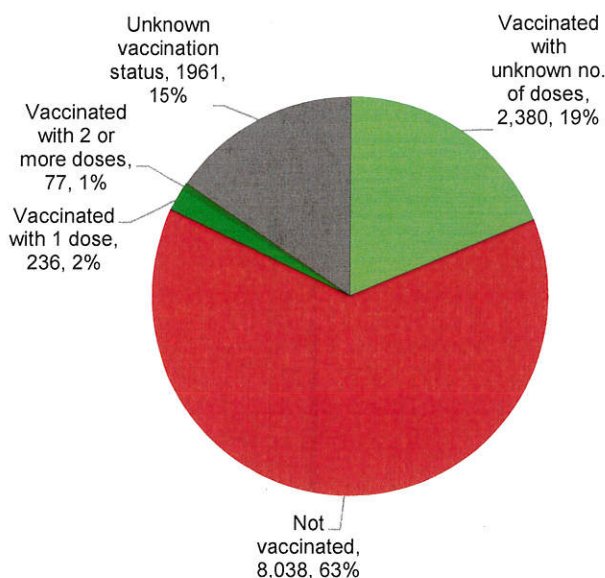
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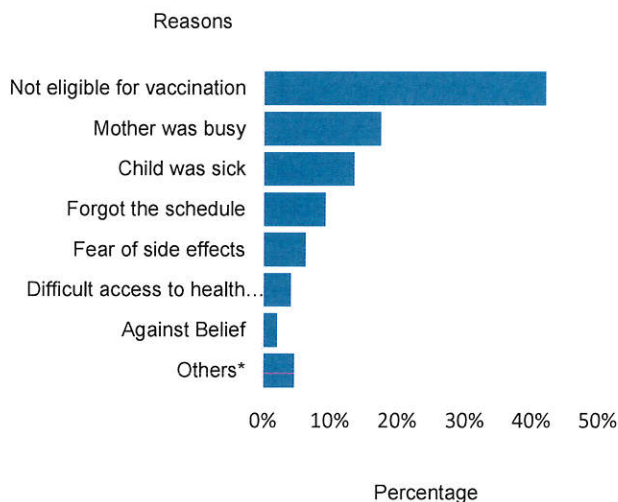


Majority (8,038, 63%) of the measles cases were not vaccinated (Figure 8). Top reasons for non-vaccination of measles-containing vaccine among confirmed cases were: not eligible for vaccination (42%), mother was busy (18%) and child was sick (14%) (Figure 9).

**Figure 8. Vaccination Status of Measles Cases, Philippines, January 1 to February 23, 2019 (n=12,692)**



**Figure 9. Reasons for Non-vaccination of Measles Vaccine among Measles Cases\*, Philippines, January 1 to February 23, 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, and lost vaccination card

#### Profile of Measles Death

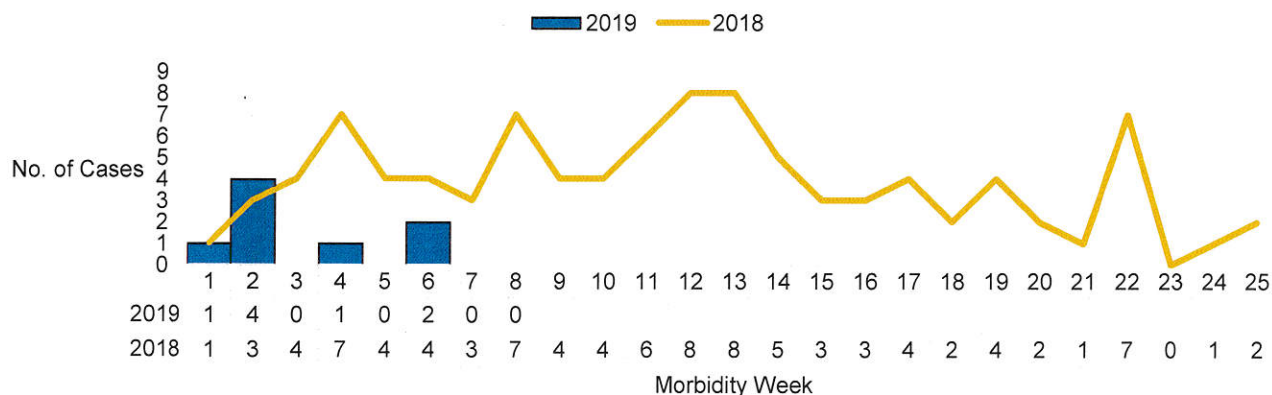
There were 207 deaths (CFR=1.63%) out of the 12,692 measles cases. Ages of deaths ranged from **less than 1 month – 34 years old** (median of 1 year). Top 3 age groups with highest number of deaths were: 1-4 years (105, 51%), less than 9 months (76, 37%), and 9-11 months (16, 8%). Majority (171, 83%) of deaths were not vaccinated.

#### Confirmed Rubella Cases

##### Trend in the Philippines

There were 8 confirmed rubella cases from January 1 to February 23, 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=8)**





### Geographic Distribution

Confirmed rubella cases were from Regions I, III, IVA, VI, IX, X, XI, and CAR. This is 76% lower compared to the same time period in 2018 (33). No deaths were reported (Table 3).

**Table 3. Confirmed Rubella Cases by Region, Philippines, January 1 to February 23, 2019 (n=8) vs. January 1 to February 23, 2018**

Region	2019		2018		% Change
	Cases	Deaths	Cases	Deaths	
<b>PHL</b>	<b>8</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>↓ 76</b>
I	1	0	2	0	↓ 50
II	0	0	1	0	↓ 100
III	1	0	0	0	↑
IVA	1	0	6	0	↓ 83
MIMAROPA	0	0	1	0	↓ 100
V	0	0	0	0	-
VI	1	0	1	0	0
VII	0	0	1	0	↓ 100
VIII	0	0	0	0	-
IX	1	0	1	0	0
X	1	0	2	0	↓ 50
XI	1	0	13	0	↓ 92
XII	0	0	4	0	↓ 100
ARMM	0	0	0	0	-
CAR	1	0	1	0	0
CARAGA	0	0	0	0	-
NCR	0	0	0	0	-

### Profile of Rubella Case

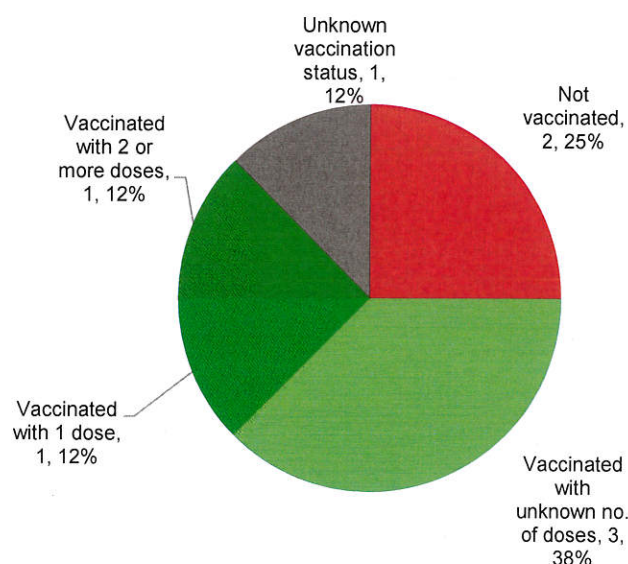
There were 4 males and 4 females among the confirmed rubella cases. Age of cases ranged from **10 months to 38 years old** (median of 15 years). The most affected age groups were: 20-24 years (2, 25%) and 35-39 years (2, 25%) (Figure 11).

Most (3, 38%) of the confirmed rubella cases were vaccinated but with unknown number of doses. Only 1 (12%) case was reported to have 2 or more doses of measles-containing vaccine which may be MMR (measles-mumps-rubella), the vaccine with rubella component (Figure 12).

**Figure 11. Confirmed Rubella Cases by Age Group and Sex, Philippines, January 1 to February 23, 2019 (n=8)**



**Figure 12. Vaccination Status of Confirmed Rubella Cases, Philippines, January 1 to February 23, 2019 (n=8)**





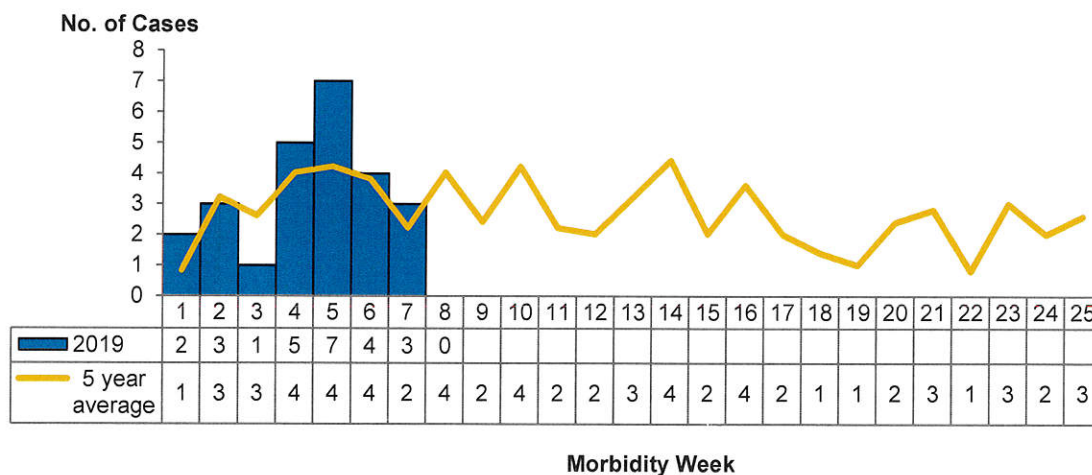


## II. DIPHTHERIA

### Trend in the Philippines

A total of **25** diphtheria cases were reported nationwide from January 1 – February 23, 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 - 8**  
(January 1 – February 23, 2019 (N=25))



### Geographic Distribution

There has been an **56%** increase of diphtheria cases from 16 cases in 2018 to 25 cases in 2019, same time period. Majority of reported diphtheria cases came from NCR (8, 32%) followed by Region III with (6, 24%) (Table 4). Two (8%) of cases were laboratory confirmed out of 25 cases. One (1) cluster identified as of February 23, 2019. A cluster is defined as two or more diphtheria cases from the same barangay reported within four consecutive weeks (Annex A).

**Table 4. Reported Diphtheria Cases by Region, Philippines,**  
**January 1 to February 23, 2019 (N=25) vs. January 1 to February 23, 2018**

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
<b>PHILIPPINES</b>	<b>25</b>	<b>7</b>	<b>16</b>	<b>9</b>	<b>↑56</b>
I	0	0	0	0	-
II	0	0	0	0	-
<b>III</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>↑200</b>
IVA	3	0	5	4	↓40
<b>MIMAROPA</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>↑</b>
V	1	0	1	0	0
VI	3	1	0	0	-
VII	0	0	0	0	-
VIII	0	0	1	1	↓100
IX	2	0	0	0	-
X	0	0	0	0	-
XI	0	0	1	0	↓100
XII	0	0	0	0	-
<b>ARMM</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>↑</b>
CAR	0	0	0	0	-
CARAGA	0	0	0	0	-
<b>NCR</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>↑33</b>



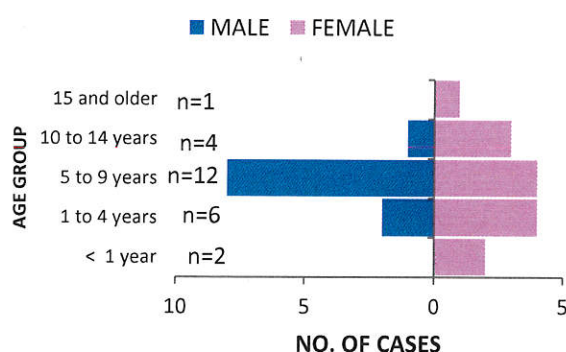


## Profile of Cases

### A. Cases

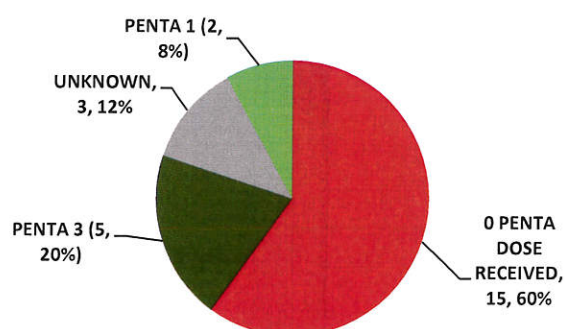
There were **11 males (44%)** and **14 females (56%)** among the reported diphtheria cases. Age of cases ranged from **10 months to 24 years old** (median age of 6 years). Age groups with most number of cases were **5 – 9 years old (12, 48%)**, followed by **1 – 4 years old** with (6, 24%) (Figure 14).

**Figure 14. Diphtheria Cases by Age Group and Sex, Philippines, January 1 to February 23, 2019 (N=25)**



Vaccination status showed that **5 (20%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. **Fifteen (60%)** did not receive a dose of the DPT/Pentavalent vaccine (Figure 15).

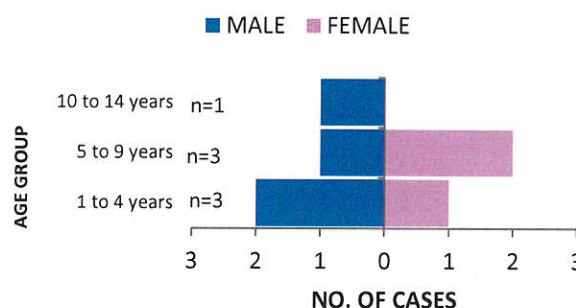
**Figure 15. Reported Diphtheria Cases by DPT Dose Received, Philippines, January 1 to February 23, 2019 (N=25)**



### B. Deaths

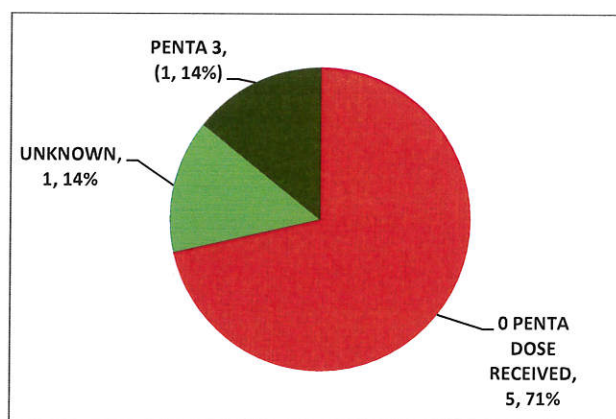
There were **seven (7)** deaths (CFR=28%) among the 25 reported diphtheria cases. Ages of deaths ranged from 2 to 11 years old (median age of 5 years). Age groups with the most number of deaths were **1 – 4 years old** and **5 - 9 years old** both have (3, 43%) (Figure 16).

**Figure 16. Reported Diphtheria Deaths by Age Group and Sex, Philippines, January 1 to February 23, 2019 (n=7)**



Vaccination status showed that Majority (5, 71%) of the reported deaths did not received the DPT/Pentavalent vaccine while (1, 14%) receive 1 dose of the DPT/Pentavalent vaccine and (1, 14%) had unknown vaccination status received (Figure 17).

**Figure 17. Diphtheria Deaths by DPT Dose Received, Philippines, January 1 to February 23, 2019 (n=7)**



### C. Confirmed Cases

Two (2) **males** were laboratory confirmed diphtheria cases. Ages 2 and 8 years old. Both confirmed cases **were not vaccinated** with the DPT/Pentavalent vaccine.

### D. Profile of Confirmed Diphtheria Deaths

There was one (1) death among two (2) laboratory confirmed pertussis cases. Age of the reported death was 2 years old.

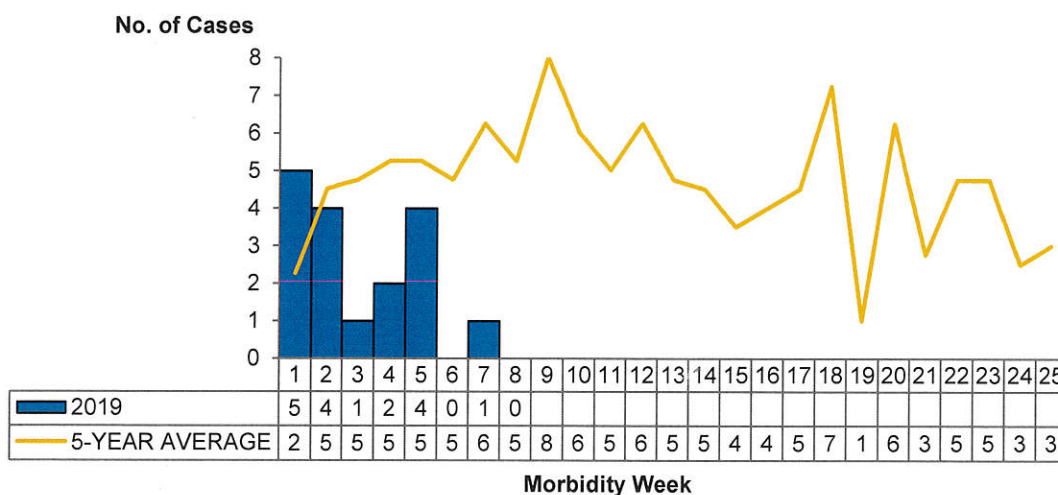


### III. PERTUSSIS

#### Trend in the Philippines

A total of **17** pertussis cases were reported nationwide from January 1 – February 23, 2019. The distribution of pertussis cases for 2019 compared to the 5- year average of cases from 2014 to 2018 is shown below (Figure 18).

**Figure 18. Reported Pertussis Cases by Morbidity Week, Philippines, January 1 to February 23, 2019 (N=17)**



#### Geographic Distribution

There has been an **71%** decrease among the reported pertussis cases with 59 reported cases in 2018 and 17 cases in 2019, same time period. Majority of the reported pertussis cases came from Region XI (5, 29%) followed by NCR (4, 24%) (Table 5). Two (12%) cases were confirmed out of 17 cases. No reported Pertussis clusters identified as of February 23, 2019. A cluster is defined as two (2) or more pertussis cases from the same barangay reported within four (4) consecutive weeks.

**Table 5. Reported Pertussis Cases by Region, Philippines, January 1 to February 23, 2019 (N=17) vs. January 1 to February 23, 2018**

REGION	2019		2018		PERCENT CHANGE
	CASES	DEATHS	CASES	DEATHS	
<b>PHL</b>	<b>17</b>	<b>2</b>	<b>59</b>	<b>3</b>	<b>↓71</b>
I	1	0	2	0	↓50
II	3	0	3	2	0
III	1	0	7	0	↓86
IVA	0	0	6	0	↓100
MIMAROPA	0	0	0	0	-
V	0	0	1	0	↓100
VI	0	0	2	0	↓100
VII	2	0	6	0	↓67
VIII	0	0	0	0	-
IX	0	0	0	0	-
X	1	1	1	0	0
XI	5	0	7	1	↓29
XII	0	0	0	0	-
ARMM	0	0	2	0	↓100
CAR	0	0	1	0	↓100
CARAGA	0	0	8	0	↓100
NCR	4	1	13	0	↓69

Percentages may not equal to 100 due to rounding off of figures

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.

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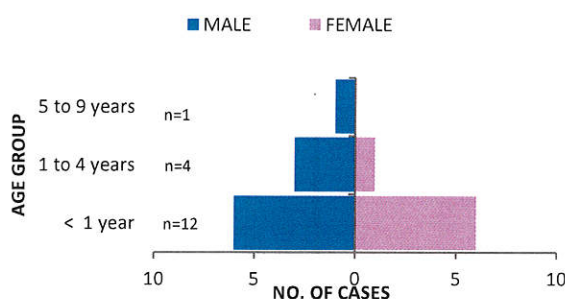


## Profile of Cases

### A. Cases

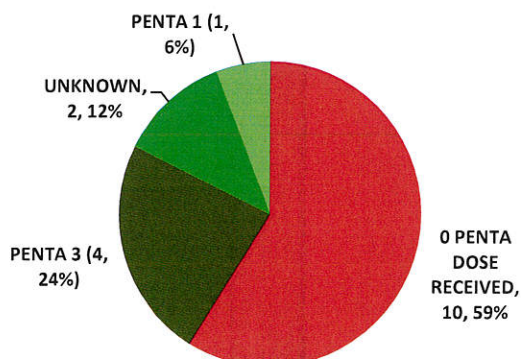
There were **10 males (59%)** and **7 females (41%)** among the reported pertussis cases. Age of cases ranged from **1 month to 6 years old** (median age of 3 months). Age groups with most number of cases were **below 1 years old** with (12, 71%) followed by 1 – 4 years old with (4, 24%) (Figure 19).

**Figure 19. Pertussis Cases  
by Age Group and Sex,  
Philippines, January 1 to February 23, 2019 (N=17)**



Vaccination status showed that **(4, 24%)** of the reported cases received **complete 3 primary doses** of the DPT/Pentavalent vaccine. 10 (59%) did not receive a dose of the DPT/Pentavalent vaccine. Two (12%) have unknown dose received and one (6%) received only 1 dose. (Figure 20).

**Figure 20. Reported Pertussis Cases  
by DPT Dose Received,  
Philippines, January 1 to February 23, 2019 (N=17)**



### B. Deaths

There were **two (2)** deaths (CFR=12%) among the 17 reported pertussis cases. Ages of the reported deaths were 1 and 2 months old).

Vaccination status showed that 2 (100%) of the reported deaths did not received the DPT/Pentavalent vaccine.

### C. Confirmed Cases

Two **(2) females** were laboratory confirmed pertussis cases. Ages 2 and 3 months. Both confirmed cases **were not vaccinated** with the DPT/Pentavalent vaccine.

### D. Profile of a Confirmed Pertussis death

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

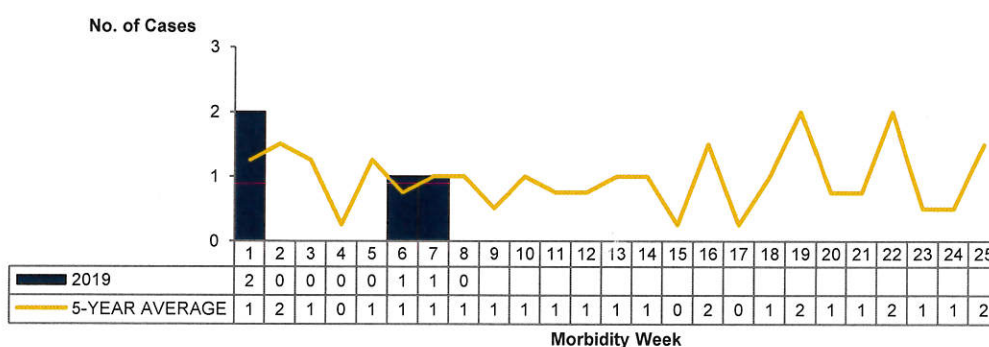


#### IV. NEONATAL TETANUS

##### Trend in the Philippines

A total of **four (4)** clinically confirmed neonatal tetanus (NT) cases were reported nationwide from January 1 – February 23, 2019. The distribution of neonatal tetanus cases for 2019 compared to the 5-year average of cases from 2014 to 2018 is shown below (Figure 21).

**Figure 21. Neonatal Tetanus Cases by Morbidity Week, Philippines, January 1 to 26, 2019 (N=4)**



##### Geographic Distribution

There has been a **60%** decrease of reported neonatal tetanus cases from 10 cases in 2018 to 4 cases in 2019, same time period. **ARMM** reported to have two (2) cases, while Region VI and XII have one (1) case each (Table 6). All regions have maintained the <1/1000 livebirths NT rate under Maternal and Neonatal Tetanus Elimination standards

**Table 6. Neonatal Tetanus Cases by Region, Philippines, January 1 to 26, 2019 (N=4) vs. January 1 to February 23, 2018**

REGION	2019			2018		
	Cases	NT rate (per 1,000 livebirths)	Deaths	Cases	NT rate (per 1,000 livebirths)	Deaths
<b>PHL</b>	<b>4</b>	<b>0.001</b>	<b>2</b>	<b>10</b>	<b>0.004</b>	<b>6</b>
I	0	0.000	0	0	0.000	0
II	0	0.000	0	0	0.000	0
III	0	0.000	0	1	0.003	1
IVA	0	0.000	0	0	0.000	0
MIMAROPA	0	0.000	0	0	0.000	0
V	0	0.000	0	0	0.000	0
VI	1	0.005	1	0	0.000	0
VII	0	0.000	0	0	0.000	0
VIII	0	0.000	0	1	0.008	1
IX	0	0.000	0	2	0.020	1
X	0	0.000	0	0	0.000	0
XI	0	0.000	0	0	0.000	0
XII	1	0.008	1	1	0.008	1
ARMM	2	0.018	0	4	0.037	2
CAR	0	0.000	0	0	0.000	0
CARAGA	0	0.000	0	0	0.000	0
NCR	0	0.000	0	1	0.003	0





## Profile of Cases

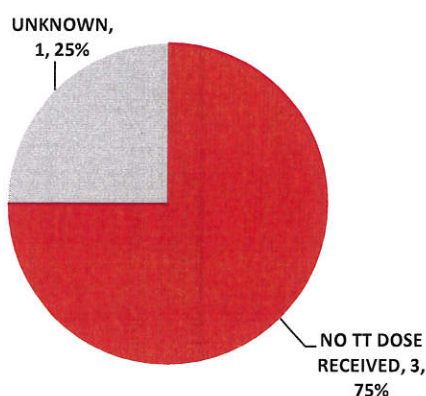
### A. Age group and Sex

Among the clinically-confirmed NT cases, two (50%) **male** and two (50%) **female**. Age of cases ranges from 5 – 7 days old (median age of 6 days old) (Figure 22).

### B. Vaccination Status

Three (75%) of the mothers of clinically confirmed cases **did not receive any dose of the tetanus toxoid vaccine**, followed with unknown vaccination status (1, 25%). (Figure 22).

**Figure 22. Clinically Confirmed Neonatal Tetanus Cases by Vaccination Status, Philippines, January 1 to February 23, 2019 (N=4)**



### C. Delivery Practices among Clinically Confirmed Neonatal Tetanus Cases

In terms of delivery practices, 4 (100%) of the neonatal tetanus cases were delivered at home. Four (100%) of the cases were attended by a hilot. One (25%) had bamboo and three (75%) had blade as the cord cutting tool used. Umbilical stump treatment was alcohol in 2 cases (50%) while 1 (25%) used hot water and 1 (25%) was unknown (Table 7).

**Table 7. Delivery Practices of Clinically Confirmed Neonatal Tetanus Cases, Philippines, January 1 to February 23, 2019 (N=4)**

Delivery Practices	No. of Cases	Percentage
<b>Place of Delivery</b>		
Home	4	100%
<b>Delivery Attendant</b>		
Hilot	4	100%
<b>Cord Cut Tool Used</b>		
Blade	3	75%
Bamboo	1	20%
<b>Stump Treatment Used</b>		
Alcohol	2	50%
Hot water	1	25%
Unknown	1	25%

## Profile of Neonatal Tetanus Deaths

There were two (2) deaths (CFR=50%) among the 4 neonatal tetanus cases. Age of the reported deaths were 5 and 7 days old. One (50%) mother of the reported deaths had unknown vaccination status, while the other (1, 50%) did not received any dose of Tetanus Toxoid .



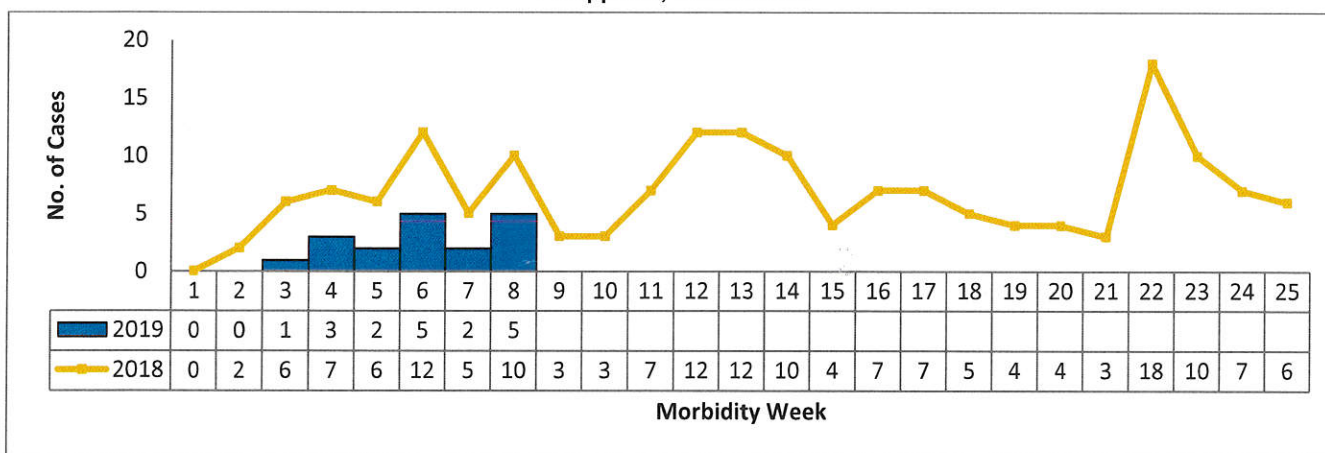
## V. ACUTE FLACCID PARALYSIS

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 **18 AFP** cases were reported nationwide from January 1 to February 23, 2019. The distribution of AFP cases for 2019 compared to 2018 is shown below (Figure 24).

**Figure 24. Reported AFP Cases by Morbidity Week (N=18)**  
**Philippines, 2018 vs 2019**



### Geographic Distribution

A total of 18 AFP cases were reported from January 1 to February 23, 2019; while 48 AFP cases were reported during the same time period last year. All 18 cases are still awaiting for laboratory results and classification. For this period, the non-polio AFP rate\* is 0.10, far from the target indicator of 1/100,000 children under 15 years old (Table 8).

**Table 8. Reported AFP Cases by Region and Classification**  
**January 1 to February 23, 2019 vs. January 1 to February 23, 2018**

Region	2019					2018	
	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)
<b>PHL</b>	<b>18</b>	<b>6</b>	<b>12</b>	<b>0</b>	<b>0.10</b>	<b>48</b>	<b>0.75</b>
I	1	0	1	0	0.00	2	0.75
II	0	0	0	0	0.00	1	0.55
III	1	0	1	0	0.00	6	0.67
IVA	2	1	1	0	0.13	10	1.02
MIMAROPA	0	0	0	0	0.00	0	0.00
V	1	0	1	0	0.00	4	1.09
VI	3	1	2	0	0.25	6	1.50
VII	2	0	2	0	0.00	1	0.24
VIII	2	2	0	0	0.75	6	1.88
IX	2	1	1	0	0.46	0	0.00
X	0	0	0	0	0.00	0	0.00
XI	1	0	1	0	0.00	1	0.35
XII	1	0	1	0	0.00	5	1.88
ARMM	1	0	1	0	0.00	0	0.00
CAR	1	1	0	0	1.00	0	0.00
CARAGA	0	0	0	0	0.00	0	0.00
NCR	0	0	0	0	0.00	6	0.81

**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.**

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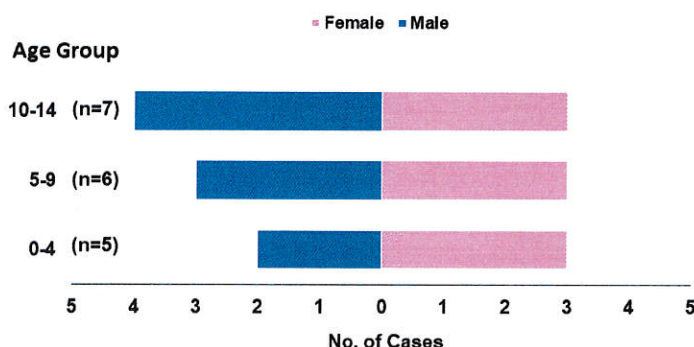


## Profile of Cases

### A. Age group and Sex

Nine (50%) are males and Nine (50%) are females. Age ranges from <11 months to 14 years (median age of 7 years old). Seven (39%) of the AFP cases reported belong to 10-14 age group (Figure 25).

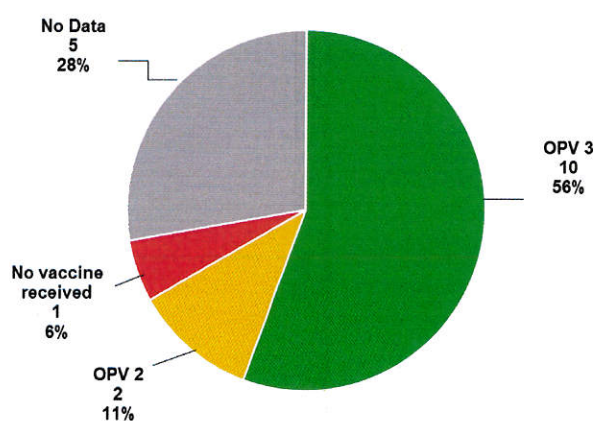
**Figure 25. AFP Cases by Sex and Age Group (N=18)**  
Philippines, January 1 to February 23, 2019



### B. Vaccination Status

Among the 18 reported AFP cases, 10 (56%) completed 3 doses of OPV, 2 (11%) had OPV 2 and 1 (6%) had no vaccine at all. Five (28%) had no data (Figure 26).

**Figure 26. Vaccination Status of AFP Cases (N=18)**  
Philippines, January 1 to February 23, 2019



### C. Laboratory Status

There were no isolated wild or vaccine-derived poliovirus from January 1 to February 23. Stool 1 was collected in 17 (94%) AFP cases and stool 2 in 16 (89%) of AFP cases (Table 9).

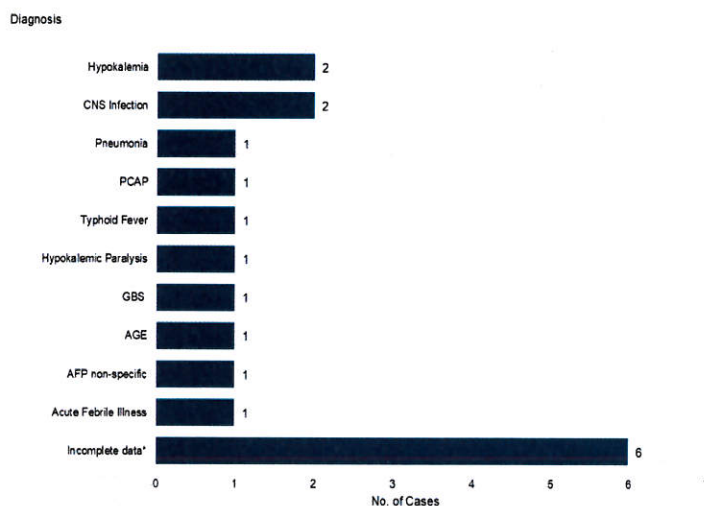
**Table 9. Laboratory Status of Reported AFP Cases (N=18)**  
Philippines, January 1 to February 23, 2019

Stool Specimen Result	Stool Specimen 1		Stool Specimen 2	
	Count	Percentage	Count	Percentage
<b>Total</b>	<b>17</b>	<b>94%</b>	<b>16</b>	<b>89%</b>
Negative for poliovirus	8	47%	7	44%
Others				
Non-polio enterovirus (NPEV)	1	6%	2	13%
Pending Lab Results	8	47%	7	44%

### D. Differential Diagnosis

The top diagnosis among AFP cases reported were Hypokalemia (2, 11%) and CNS Infection (2, 11%). However, there are 6 (33%) cases with incomplete data (Figure 27).

**Figure 27. AFP Cases by Differential Diagnosis (N=18)**  
Philippines, January 1 to February 23, 2019





**ANNEX A. CLUSTER OF DIPHTHERIA CASES**

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