



Food and Waterborne Diseases

Food and waterborne illnesses are conditions caused by eating or drinking food or water that is contaminated by microorganisms or the toxins they produce. It typically causes gastrointestinal symptoms such as abdominal pain, nausea, vomiting, and diarrhea. The mode of transmission is fecal-oral route. This summary report presents routinely collected FWBD data for the period of January 1 to December 31, 2018 (Table 1).

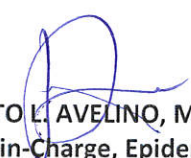
Table 1. Food & Waterborne Diseases
Philippines, 2018* vs 2017

FOOD/WATER-BORNE DISEASES	2018			2017	% Difference *2018 vs 2017
	Cases	Deaths	CFR (%)	Cases	
Acute Bloody Diarrhea	17,906	20	0.11	19,580	↓9
Confirmed Cholera	13	0	0.00	134	↓90
Confirmed Rotavirus	750	1	0.13	1,394	↓46
Hepatitis A	311	0	0.00	461	↓33
Typhoid Fever	22,234	30	0.13	24,394	↓9


PIDSR Case Definition for Food and Waterborne Diseases


Acute Bloody Diarrhea (ABD)	
Reported Case	<ul style="list-style-type: none"> A person with acute diarrhea with visible blood in the stool.
Cholera	
Suspected Case	<ul style="list-style-type: none"> Disease unknown in the area: A person aged 5 years or more with severe dehydration or who died from acute watery diarrhea, OR
	<ul style="list-style-type: none"> Disease endemic in the area: A person aged 5 years or more with acute watery diarrhea with or without vomiting, OR
	<ul style="list-style-type: none"> In an area where there is a cholera epidemic: A person with acute watery diarrhea, with or without vomiting.
Confirmed Case	<ul style="list-style-type: none"> A suspected case that is laboratory-confirmed. Isolation of <i>Vibrio cholerae</i> 01 or 0139 from stools in any patient with diarrhea.
Rotavirus	
Suspected Case	<ul style="list-style-type: none"> A child <5 years of age who undergoes treatment (means that the child received intravenous rehydration therapy while undergoing observation at the Emergency Room OR was admitted in a hospital ward) for acute diarrhea (passage of 3 or more watery stools within a 24-hour period for < 14 days) in a participating hospital.
Confirmed Case	<ul style="list-style-type: none"> A suspected case that has been laboratory-confirmed as Rotavirus.
Hepatitis A	
Suspected Case	<ul style="list-style-type: none"> A person with acute illness characterized by acute jaundice, dark urine, loss of appetite, body weakness, extreme fatigue and right upper quadrant tenderness.
Confirmed Case	<ul style="list-style-type: none"> A suspected case that is laboratory confirmed (positive for IgM anti-HAV).
Typhoid Fever	
Suspected Case	<ul style="list-style-type: none"> A person with an illness characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea, and non-productive cough.
Probable Case	<ul style="list-style-type: none"> A suspected case that is epidemiologically linked to a confirmed case in an outbreak.
Confirmed Case	<ul style="list-style-type: none"> A suspected or probable case that is laboratory confirmed. (Isolation of <i>Salmonella enterica</i> from blood, stool, or other clinical specimen)


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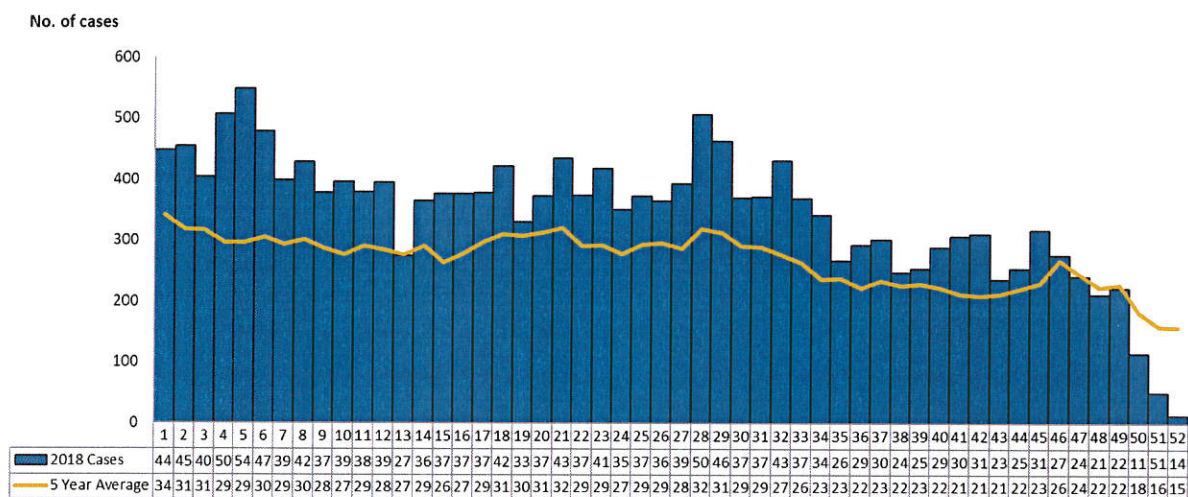


I. Acute Bloody Diarrhea (ABD)

Trend in the Philippines

A total of 17,906 acute bloody diarrhea cases were reported nationwide from January 1 to December 31, 2018. The distribution of cases for 2018 compared to the 5-year average of cases from 2013-2017 is shown below (Figure 1).

Figure 1. Acute Bloody Diarrhea Cases by Morbidity Week (N=17,906)
Philippines, January 1 to December 31, 2018 vs 5 Year Average Data



*same time period

Geographical Distribution

Despite an increase in cases in 2018 compared to the 5-year average, there was a noted 9% decrease of reported ABD cases from 19,580 cases in 2017 to 17,906 cases in 2018 for the same period (January 1 to December 31, 2018). Most of the reported cases were from the following regions: Region VII (6,398, 36%), CARAGA (2,754, 15%), Region IX (2,515, 14%), CAR (1,640, 9%), and Region X (1,167, 7%) (Table 2).

Table 2. Acute Bloody Diarrhea Cases & Deaths (N=17,906)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	17,906	20	19,580	50	↓9
I	81	0	100	0	↓19
II	759	0	1,550	1	↓51
III	637	0	403	0	↑58
IV-A	842	0	811	2	↑4
MIMAROPA	115	0	127	0	↓9
V	27	0	69	0	↓61
VI	78	0	146	0	↓47
VII	6,398	16	6,868	38	↓7
VIII	316	0	490	1	↓36
IX	2,515	1	1,719	3	↑46
X	1,167	0	1,338	1	↓13
XI	149	0	333	2	↓55
XII	197	0	305	0	↓35
ARMM	169	1	176	1	↓4
CAR	1,640	0	1,602	1	↑2
CARAGA	2,754	2	3,418	0	↓19
NCR	62	0	125	0	↓50

*From the period of January 1 to December 31, 2018

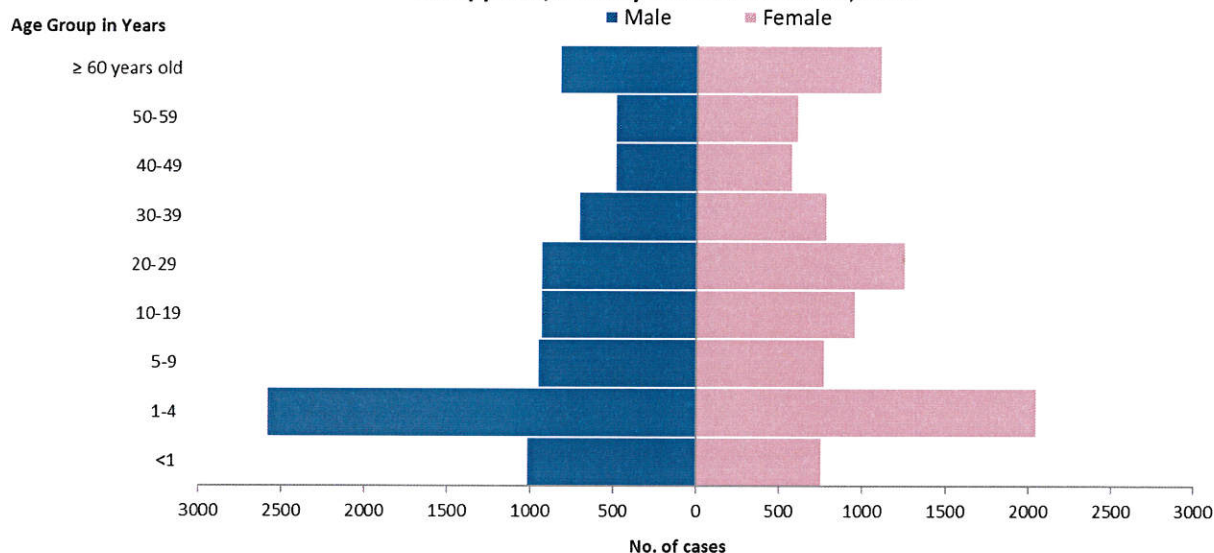
**From the period of January 1 to December 31, 2017



Profile of Cases

Majority of the reported ABD cases were male (8,995, 50.2%). Age of cases ranged from less than 1 month to 98 years old (median age of 14 years). The most affected age group was 1 year to 4 years (4,637, 26%) (Figure 2).

Figure 2. Acute Bloody Diarrhea Cases by Age Group and Sex (N=17,906)
Philippines, January 1 to December 31, 2018



Laboratory Results

A total of 11,798 (66%) samples were collected for laboratory testing (Figure 3). Of these, 10,331 (88%) yielded positive for different organisms. The frequently identified organism was *Entamoeba histolytica* (8,753, 85%) (Table 3).

Figure 3. ABD Cases by Laboratory Status (N=17,906)
Philippines, January to December 2018

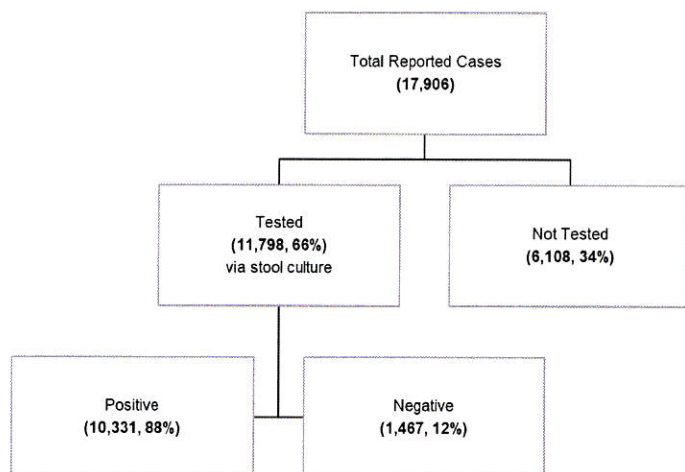


Table 3. Top 3 Organisms in ABD Cases*
Philippines, January to December 2018

Organism	Cases
<i>Entamoeba histolytica</i>	8,753
<i>Shigella</i>	604
<i>Escherichia Coli</i>	356

*multiple results and tested via stool culture

Profile of Deaths

There were twenty (20) deaths (CFR=0.11%) out of the 17,906 reported ABD cases. Majority of the reported deaths were male (14, 70%). Age of deaths ranged from 7 months old to 80 years old (median age of 47 years). Age groups of these deaths were : less than 1 year (2, 10%), 1 to 4 years (3, 15%), 5 to 9 years (2, 10%), 10 to 19 years (1, 5%), 30 to 39 years (1, 5%), 40 to 49 years (1, 5%), 50 to 59 years (4, 20%) and 60 years and above (6, 30%).

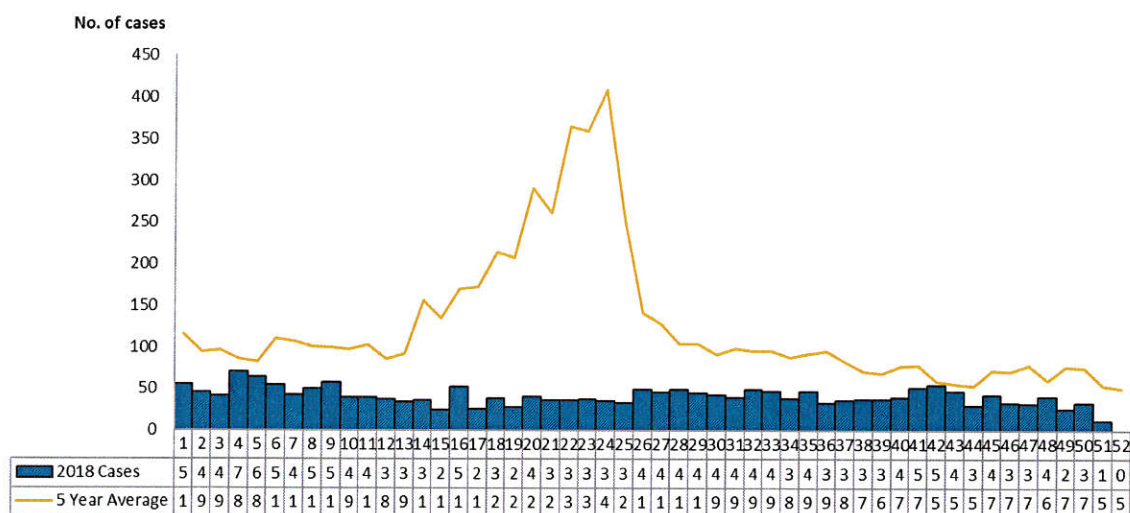


II. Cholera

Trend in the Philippines

A total of 2,102 reported cholera cases were reported nationwide from January 1 to December 31, 2018. The distribution of cases for 2018 compared to the 5-year average of cases from 2013-2017 is shown below (Figure 4).

Figure 4. Cholera Cases by Morbidity Week (N=2,102)
Philippines, January 1 to December 31, 2018 vs 5 Year Average Data



*same time period

Geographical Distribution

There was a 47% decrease of reported cholera cases from 3,929 cases in 2017 to 2,102 cases in 2018. Most of the reported cases were from the following regions: CARAGA (1,176, 56%), Region V (716, 34%), Region X (162, 8%), Region XI (15, 1%) and Region IV-A (11, 1%) (Table 4).

Table 4. Reported Cholera Cases & Deaths by Region (N=2,102)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	2,102	6	3,929	27	↓47
I	0	0	3	0	↓100
II	0	0	0	0	-
III	0	0	0	0	-
IV-A	11	1	121	0	↓91
MIMAROPA	6	0	272	4	↓98
V	716	5	1,502	11	↓52
VI	1	0	11	0	↓91
VII	2	0	465	4	↓100
VIII	1	0	18	1	↓94
IX	2	0	5	0	↓60
X	162	0	834	6	↓81
XI	15	0	5	0	↑200
XII	3	0	3	0	0
ARMM	3	0	6	0	↓50
CAR	3	0	1	0	↑200
CARAGA	1,176	0	680	1	↑73
NCR	1	0	3	0	↓67

*From the period of January 1 to December 31, 2018

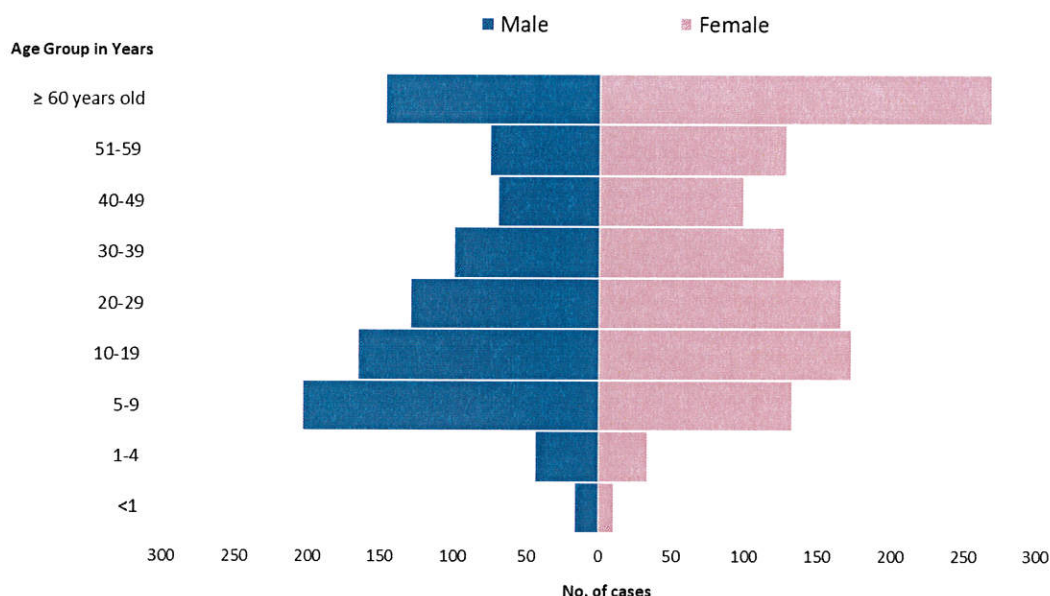
**From the period of January 1 to December 31, 2017



Profile of Cases

Majority of the reported cases were female (1,144, 54%). Age of suspect cases ranged from less than 1 month to 95 years old (median age of 28 years). The most affected age groups were 60 years and above (417, 20%), 10 to 19 years (339, 16%) and 5 to 9 years (337, 16%) (Figure 5).

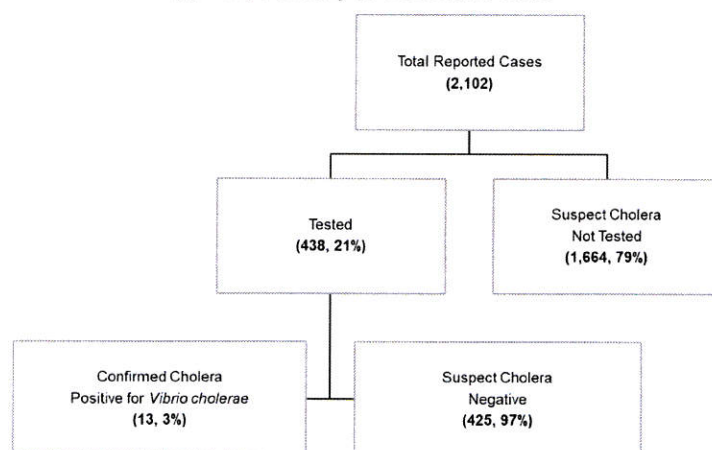
Figure 5. Reported Cholera Cases by Age Group and Sex (N=2,102)
Philippines, January 1 to December 31, 2018



Laboratory Results

A total of 438 (21%) specimens were tested (Figure 6). Of these, 425 (97%) were negative and only 13 (3%) were positive for *Vibrio cholerae* (one *V. cholerae*, eight *V. cholerae* Ogawa, one *V. cholerae* Ogawa Biotype El Tor and three *V. cholerae* 0139) (Table 5). Thirteen laboratory confirmed cases were reported from regions XII (3, 23%), CARAGA (3, 23%), IVA (2, 15%), VI (1, 8%), VII (1, 8%), X (1, 8%), XI (1, 8%) and ARMM (1, 8%).

Figure 6. Reported Cholera Cases by Laboratory Status (N=2,102) **Table 5. Laboratory Status of Cholera cases (N=2,102)**
Philippines, January to December 2018



Total Reported Cases	2,102
Tested	438 (21%)
Positive (stool culture)	13 (3%)
<i>Vibrio cholerae</i>	1 (8%)
<i>Vibrio cholerae</i> Ogawa	8 (62%)
<i>Vibrio cholerae</i> 0139	3 (23%)
<i>Vibrio Cholerae</i> Ogawa Biotype El Tor	1 (8%)
Negative	425 (97%)
Not Tested	1,664 (79%)

Profile of Deaths

There were six deaths (CFR=0.3%) out of the 2,102 reported cholera cases. All reported deaths were male (6, 100%). Ages of cases who died were: 6 years old, 8 years old, 20 years old, 39 years old, 58 years old and 77 years old. Among those who died, none was a confirmed cholera case.



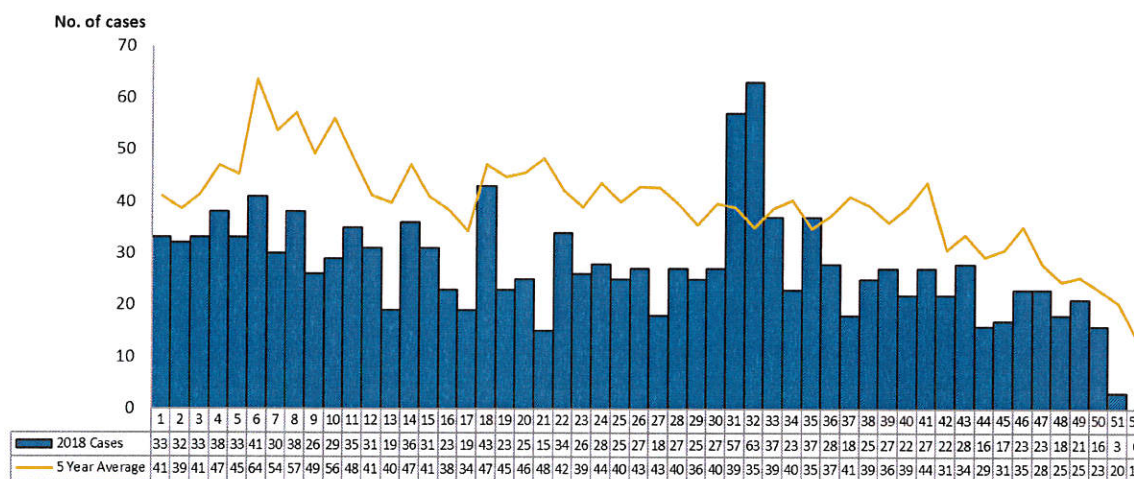
III. Hepatitis A

A. Reported Cases

Trend in the Philippines

A total of 1,421 reported acute viral hepatitis cases were reported nationwide from January 1 to December 31, 2018. The distribution of cases for 2018 compared to the 5-year average of cases from 2013-2017 is shown below (Figure 7).

Figure 7. Acute Viral Hepatitis Cases by Morbidity Week (N=1,421)
Philippines, January 1 to December 31, 2018 vs 5 Year Average Data



*same time period

Geographical Distribution

There was a 24% decrease of reported acute viral hepatitis cases from 1,873 cases in 2017 to 1,421 cases in 2018. Most of the reported cases were from the following regions: Region VI (279, 20%), Region VII (244, 17%), NCR (166, 12%), Region X (147, 10%) and Region IV-A (115, 8%) (Table 6).

Table 6. Reported Acute Viral Hepatitis Cases & Deaths by Region (N=1,421)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	1,421	14	1,873	21	↓24
I	36	1	58	0	↓38
II	24	0	36	0	↓33
III	74	1	60	2	↑23
IV-A	115	0	127	0	↓9
MIMAROPA	29	0	60	1	↓52
V	24	1	55	3	↓56
VI	279	0	300	1	↓7
VII	244	10	342	10	↓29
VIII	6	0	24	1	↓75
IX	87	0	83	0	↑5
X	147	0	164	0	↓10
XI	24	0	67	0	↓64
XII	24	0	63	0	↓62
ARMM	38	0	32	0	↑19
CAR	12	0	24	0	↓50
CARAGA	92	0	157	1	↓41
NCR	166	1	221	2	↓25

*From the period of January 1 to December 31, 2018

**From the period of January 1 to December 31, 2017

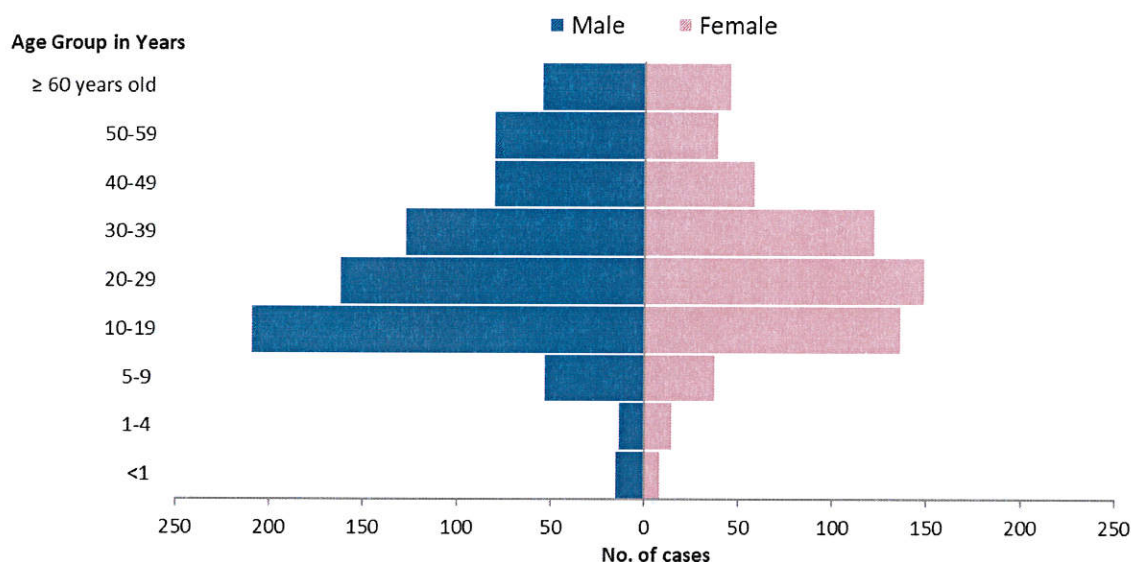


Profile of Cases

Age Group and Sex

Majority of the reported cases were male (803, 57%). Age of cases ranged from less than 1 month to 92 years old (median age of 26 years). Most of the cases were 10 to 19 years old (347, 24%) (Figure 8).

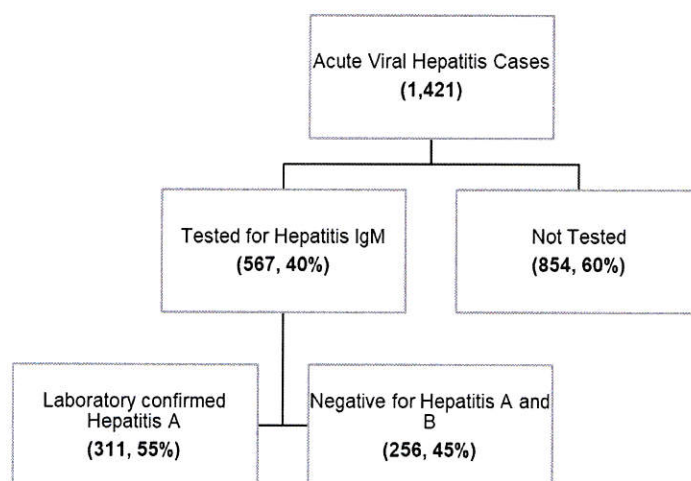
Figure 8. Acute Viral Hepatitis Cases by Age Group and Sex (N=1,421)
Philippines, January 1 to December 31, 2018



Laboratory Status

A total of 567 (40%) reported cases were tested for Hepatitis A IgM. Among those tested, 311 (55%) were positive for Hepatitis A (Figure 9).

Figure 9. Acute Viral Hepatitis Cases by Case Classification (N=1,421)
Philippines, January to December 2018



Profile of Deaths

Fourteen deaths were reported (CFR=0.99%). Majority of the reported deaths were male (12, 86%). Age groups of these deaths were: 5-9 years (1, 7%), 10 to 19 years (1, 7%), 20 to 29 years (1, 7%), 30 to 39 years (1, 7%), 40 to 49 years (3, 21%), 50 to 59 years (4, 29%) and 60 years and above (3, 21%).

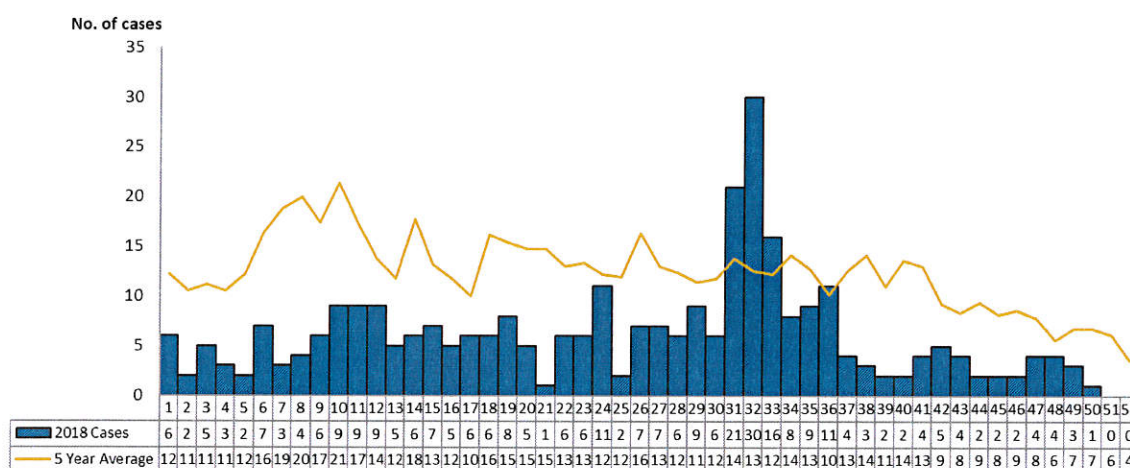


B. Confirmed Cases

Trend in the Philippines

Out of 1,421 acute viral hepatitis cases, there were 311 confirmed Hepatitis A cases reported nationwide from January 1 to December 31, 2018. The distribution of confirmed cases for 2018 compared to the 5-year average of cases from 2013-2017 is shown below (Figure 10).

Figure 10. Confirmed Hepatitis A Cases by Morbidity Week (n=311)
Philippines, January 1 to December 31, 2018 vs 5 Year Average Data



*same time period

Geographical Distribution

There was a 33% decrease of confirmed Hepatitis A cases from 461 cases in 2017 to 311 cases in 2018 for the same period (January 1 to December 31, 2018). Most of the cases were from the following regions: Region VI (98, 32%), Region VII (75, 24%), IV-A (24, 8%), NCR (22, 7%) and Region IX (20, 6%) (Table 7). There were no reported deaths among cases.

Table 7. Confirmed Hepatitis A Cases & Deaths by Region (n=311)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	311	0	461	1	↓33
I	2	0	15	0	↓87
II	8	0	5	0	↑60
III	3	0	16	1	↓81
IV-A	24	0	32	0	↓25
MIMAROPA	3	0	1	0	↑200
V	3	0	17	0	↓82
VI	98	0	65	0	↑51
VII	75	0	120	0	↓38
VIII	1	0	7	0	↓86
IX	20	0	24	0	↓17
X	15	0	55	0	↓73
XI	2	0	5	0	↓60
XII	8	0	16	0	↓50
ARMM	6	0	15	0	↓60
CAR	5	0	8	0	↓38
CARAGA	16	0	14	0	↑14
NCR	22	0	46	0	↓52

*From the period of January 1 to December 31, 2018

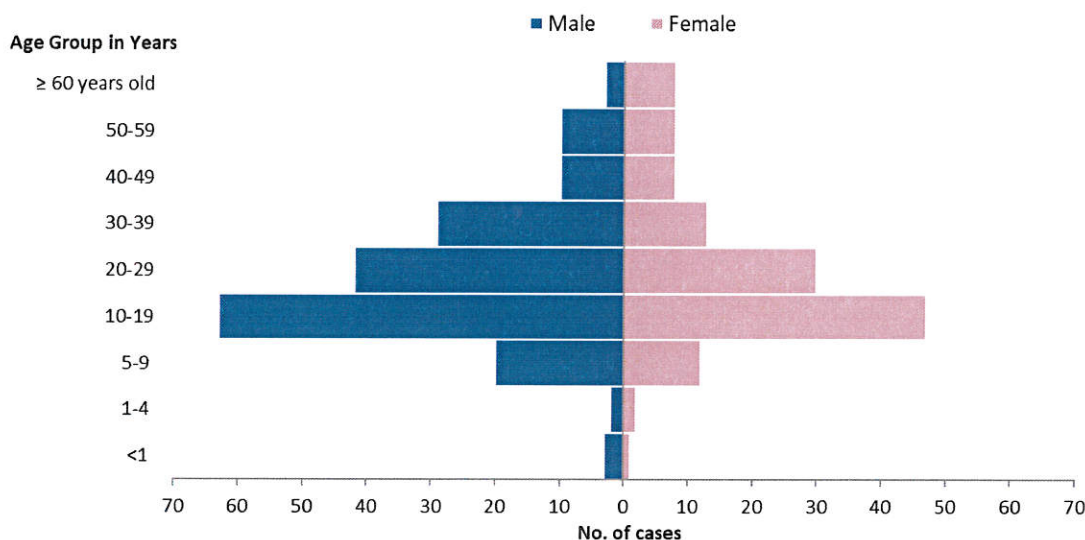
**From the period of January 1 to December 31, 2017



Profile of Cases

Majority of the cases were male (182, 59%). Age of cases ranged from less than 1 month to 82 years old (median age of 21 years). The most affected age group was 10 to 19 years (110, 35%) (Figure 11).

**Figure 11. Confirmed Hepatitis A Cases by Age Group and Sex (n=311)
Philippines, January 1 to December 31, 2018**



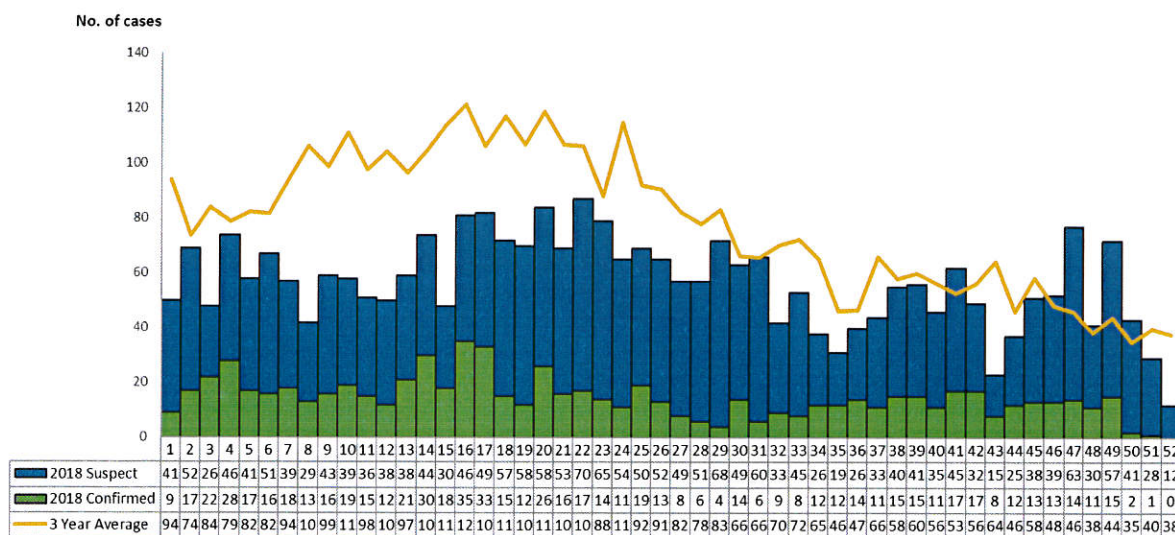
IV. Rotavirus

A. Reported Cases

Trend in the Philippines

A total of 2,955 reported rotavirus cases were reported nationwide from January 1 to December 31, 2018. The distribution of cases for 2018 compared to the 3-year average of cases from 2015-2017 is shown below (Figure 12).

**Figure 12. Rotavirus Cases by Morbidity Week and Case Classification (N=2,955)
Philippines, January 1 to December 31, 2018 vs 3 Year Average Data**



*same time period



Geographical Distribution

There was a 26% decrease of reported Rotavirus cases from 4,012 cases in 2017 to 2,955 cases in 2018. Most of the reported cases were from the following regions: Region I (615, 21%), ARMM (544, 18%), Region XII (449, 15%), Region VI (410, 14%) and Region V (374, 13%) (Table 8).

Table 8. Reported Rotavirus Cases & Deaths by Region (N=2,955)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	2,955	24	4,012	48	↓26
I***	615	7	864	20	↓29
II	0	0	0	0	-
III	4	0	1	0	↑300
IV-A	8	0	12	0	↓33
MIMAROPA***	252	0	168	1	↑50
V***	374	0	228	0	↑64
VI***	410	0	680	8	↓40
VII	1	0	2	0	↓50
VIII	0	0	0	0	-
IX	0	0	0	0	-
X	1	0	1	0	0
XI	0	0	2	0	↓100
XII***	449	4	744	9	↓40
ARMM	544	13	741	10	↓27
CAR	0	0	0	0	-
CARAGA***	73	0	297	0	↓75
NCR***	224	0	272	0	↓18

*From the period of January 1 to December 31, 2018

**From the period of January 1 to December 31, 2017

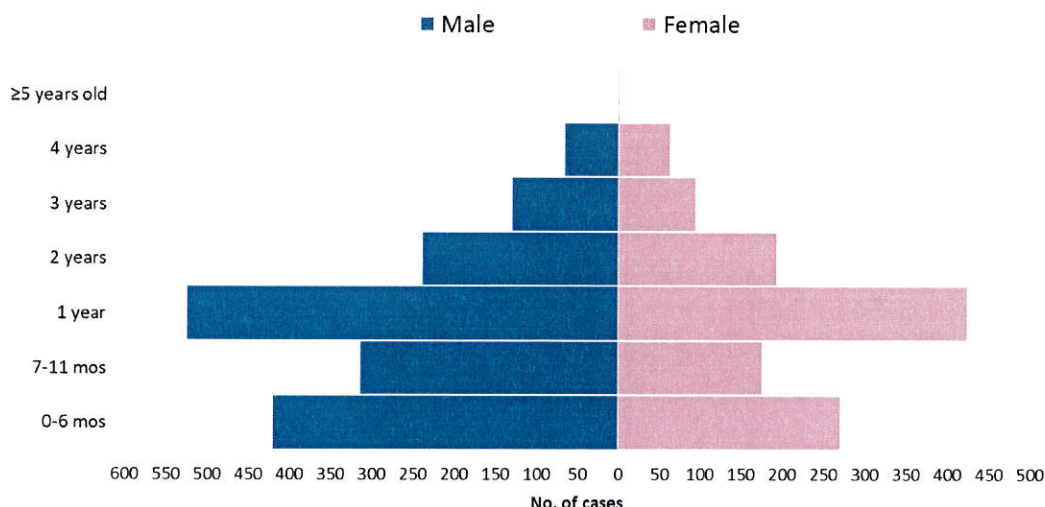
***Region with selected rotavirus sentinel sites

Profile of Cases

Age Group and Sex

Majority of the reported cases were male (1,723, 58%). Age of cases ranged from less than 1 month to 5 years old (median age of 1 year). Most of the cases were 1 year old (950, 32%) (Figure 13).

Figure 13. Reported Rotavirus Cases by Age Group and Sex (N=2,955)
Philippines, January 1 to December 31, 2018

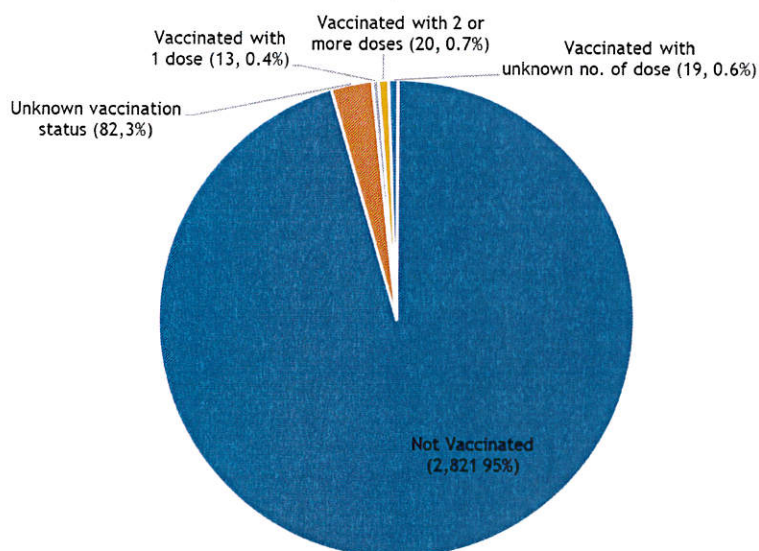




Vaccination Status

Majority of the reported cases were not vaccinated with rotavirus (2,821, 95%) (Figure 14).

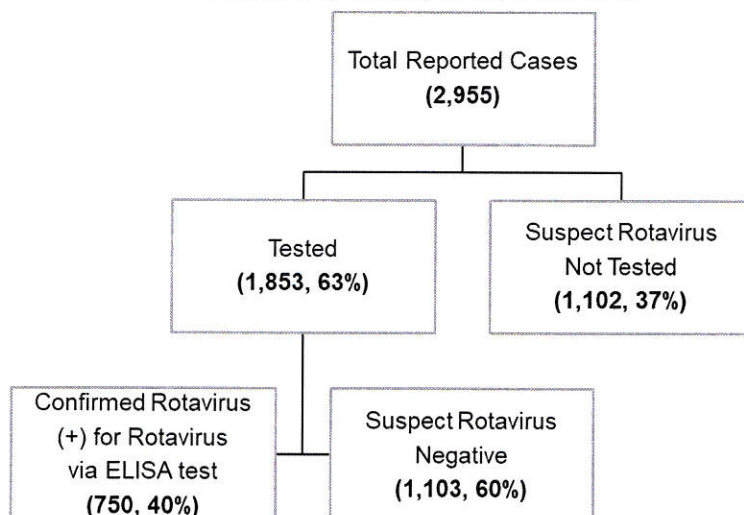
Figure 14. Vaccination Status of Reported Rotavirus Cases (N=2,955)
Philippines, January to December 2018



Laboratory Results

A total of 1,853 (63%) samples were collected for laboratory testing. Of these, 750 (40%) were laboratory confirmed for rotavirus and 1,103 (60%) were negative (Figure 15).

Figure 15. Reported Rotavirus Cases by Laboratory Status (N=2,955)
Philippines, January to December 2018



Profile of Deaths

Twenty-four deaths were reported (CFR=0.81%). Half of the reported deaths were female (12, 50%). Age groups of these deaths were : less than 1 month to 6 months (7, 29%), 7 to 11 months (5, 21%), 1 year (6, 25%), 2 years (2, 8%), 3 years (3, 13%) and 4 years (1, 4%). Among those who died, one confirmed cholera case was reported from Region I.



B. Confirmed Cases

Geographical Distribution

There was a 46% decrease of confirmed Rotavirus cases from 1,394 cases in 2017 to 750 cases in 2018. Most of the reported cases were from the following regions: Region I (220, 29%), Region VI (158, 21%), ARMM (117, 16%), Region XII (88, 12%) and NCR (75, 10%) (Table 9).

Table 9. Confirmed Rotavirus Cases & Deaths by Region (n=750)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	750	1	1,394	4	↓46
I***	220	1	355	1	↓38
II	0	0	0	0	-
III	3	0	1	0	↑200
IV-A	5	0	6	0	↓17
MIMAROPA***	2	0	66	0	↓97
V***	64	0	56	0	↑14
VI***	158	0	308	1	↓49
VII	0	0	2	0	↓100
VIII	0	0	0	0	-
IX	0	0	0	0	-
X	0	0	0	0	-
XI	0	0	2	0	↓100
XII***	88	0	197	0	↓55
ARMM	117	0	165	2	↓29
CAR	0	0	0	0	-
CARAGA***	18	0	156	0	↓88
NCR***	75	0	80	0	↓6

*From the period of January 1 to December 31, 2018

**From the period of January 1 to December 31, 2017

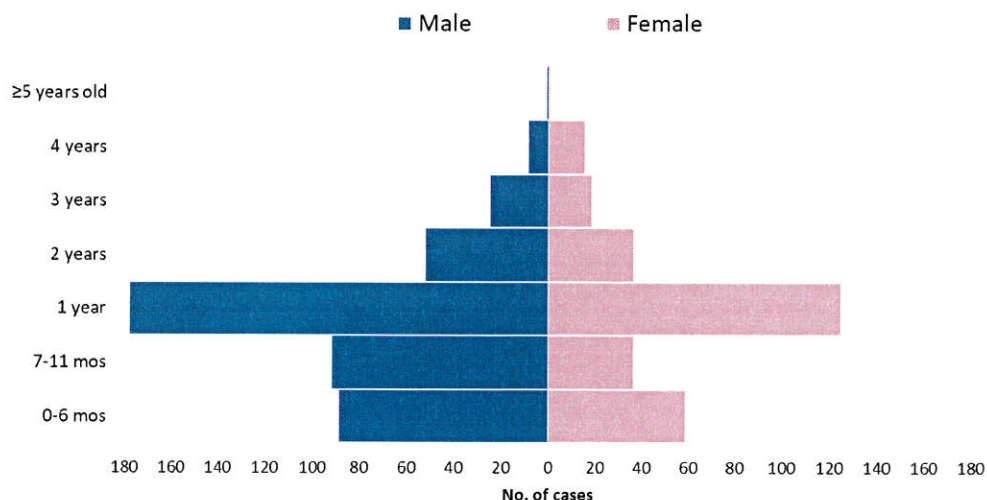
***Region with selected rotavirus sentinel sites

Profile of Cases

Age Group and Sex

Majority of the confirmed cases were male (453, 60%). Age of cases ranged from less than 1 month to 5 years old (median age of 1 year). Most of the cases were 1 year old (303, 40%) (Figure 16).

Figure 16. Confirmed Rotavirus Cases by Age group, Sex and Case Classification (n=750)
Philippines, January 1 to December 31, 2018



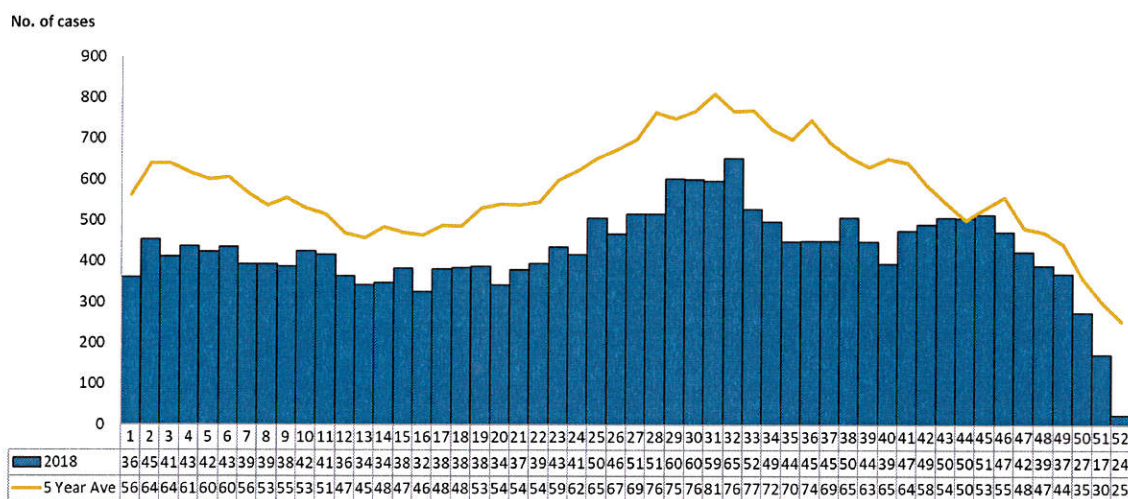


V. Typhoid Fever

Trend in the Philippines

A total of 22,234 reported typhoid fever cases were reported nationwide from January 1 to December 31, 2018. The distribution of cases for 2018 compared to the 5-year average of cases from 2013-2017 is shown below (Figure 17).

Figure 17. Reported Typhoid Fever Cases by Morbidity Week (N=22,234)
Philippines, January 1 to December 31, 2018 vs 5 Year Average Data



*same time period

Geographical Distribution

There was a 9% decrease of reported typhoid fever cases from 24,394 cases in 2017 to 22,234 cases in 2018. Most of the reported cases were from the following regions: Region X (4,320, 19%), Region VI (2,725, 12%), CAR (2,249, 10%), Region XII (1,924, 9%) and Region IVA (1,803, 8%) (Table 10).

Table 10. Reported Typhoid Fever Cases & Deaths by Region (N=22,234)
Philippines, 2018* vs 2017**

Region	2018		2017		% Change
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	22,234	30	24,394	40	↓9
I	866	0	1,397	1	↓38
II	570	0	855	3	↓33
III	562	0	725	0	↓22
IV-A	1,803	1	2,074	0	↓13
MIMAROPA	338	0	408	1	↓17
V	359	3	414	1	↓13
VI	2,725	5	2,263	4	↑20
VII	1,475	6	1,488	14	↓1
VIII	657	2	494	2	↑33
IX	1,264	4	1,765	6	↓28
X	4,320	1	4,937	0	↓12
XI	191	0	215	0	↓11
XII	1,924	2	2,472	0	↓22
ARMM	1,573	1	1,251	6	↑26
CAR	2,249	0	2,200	1	↑2
CARAGA	882	0	1,056	0	↓16
NCR	476	5	380	1	↑25

*From the period of January 1 to December 31, 2018

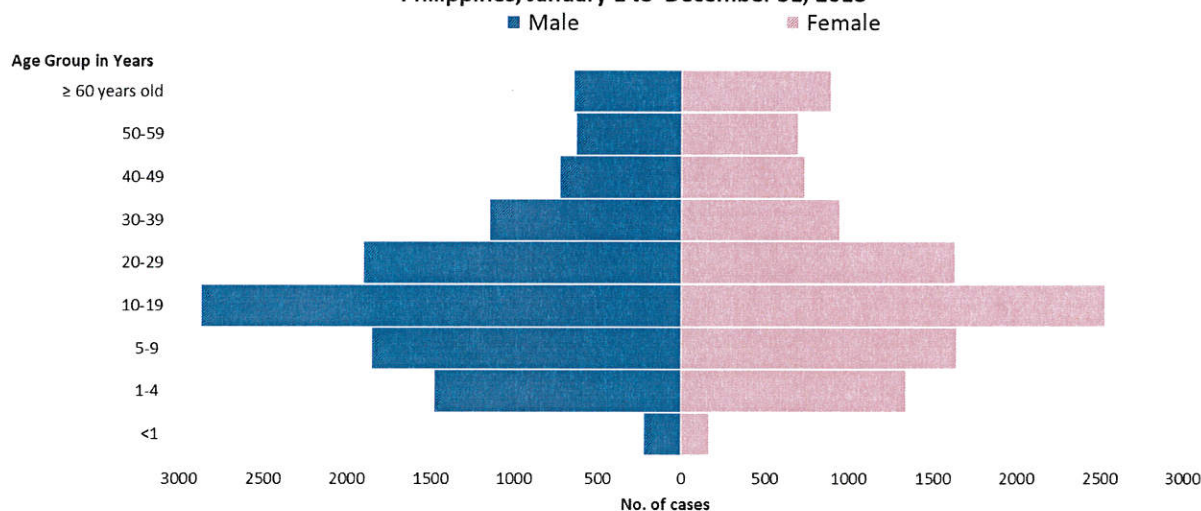
**From the period of January 1 to December 31, 2017



Profile of Cases

Majority of the reported cases were male (11,590, 52%). Age of cases ranged from less than 1 month to 99 years old (median age of 17 years). The most affected age group was 10 to 19 years old (5,405, 24%) (Figure 18).

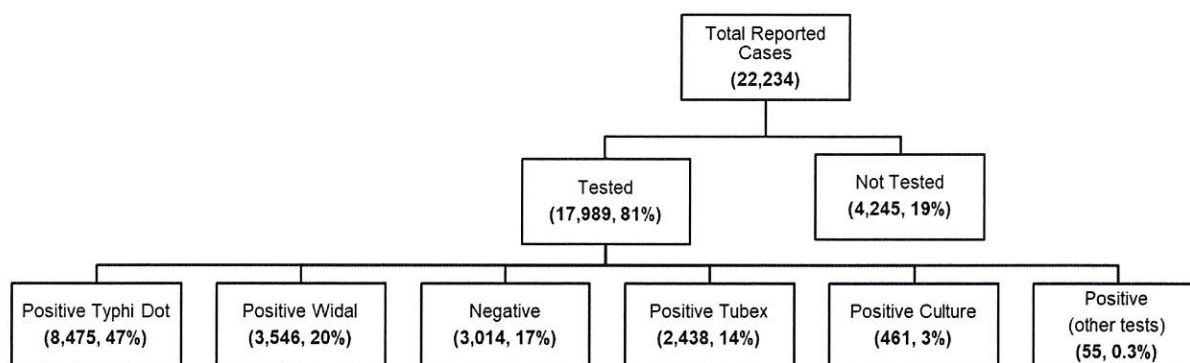
Figure 18. Reported Typhoid Fever Cases by Age Group and Sex (N=22,234)
Philippines, January 1 to December 31, 2018



Laboratory Results

A total of 17,989 (81%) specimens were referred for testing. Laboratory status of reported typhoid fever cases is shown below (Figure 19).

Figure 19. Reported Typhoid Fever Cases by Laboratory Status (N=22,234)
Philippines, January 1 to December 2018



Profile of Deaths

There were 30 deaths (CFR=0.13%) out of the 22,234 reported typhoid fever cases. Seventeen (17) reported deaths were male (57%). Age of deaths ranged from 2 to 83 years old (median age of 26 years). Age group of these deaths were: 1 to 4 years (1, 3%), 5 to 9 years (1, 3%), 10 to 19 years (8, 27%), 20 to 29 years (6, 20%), 30 to 39 (4, 13%), 40 to 49 years (2, 7%), 50 to 59 years (3, 10%) and 60 years and above (5, 17%).