



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. Exposure to a variety of pathogens in water and food causes diarrheal disease. The mode of transmission is fecal-oral route.

I. Acute Bloody Diarrhea

Trend in the Philippines

A total of 14,187 acute bloody diarrhea cases were reported nationwide from January 1 to September 30, 2017. This is 25.04% higher compared to the same time period last year (11,346) (Table 1). There were 45 reported deaths (CFR=0.32%) (Table 2).

Geographical Distribution

Most of the reported cases were from the following regions: Region VII (36.19%), CARAGA (19%), CAR (9.21%), Region IX (6.94%), and Region X (6.67%) (Fig.2 and Table 2).

Profile of Cases

Ages of cases ranged from less than 1 month to 99 years old (median= 15 years). Majority of cases were male (50.06%). The most affected age group were from 1 year to 4 years (25%) (Fig.3).

Laboratory Results

A total of 8,551 (60%) samples were referred for testing. Of these, 7,481 (87%) were laboratory confirmed with different organisms. The most identified organism was *entamoeba histolytica* (86%).

Table 2. Acute Bloody Diarrhea Cases & Deaths
Philippines, 2017* vs 2016

Region	Cases			Deaths			
	2017	2016	% Change	2017	CFR(%)	2016	CFR(%)
I	90	67	↑ 34.33	0	0.00	0	0.00
II	835	1025	↓ -18.54	0	0.00	0	0.00
III	269	166	↑ 62.05	0	0.00	0	0.00
IV-A	571	188	↑ 203.72	2	0.35	1	0.53
MIMAROPA	90	93	↓ -3.23	0	0.00	0	0.00
V	59	16	↑ 268.75	0	0.00	0	0.00
VI	81	133	↓ -39.10	0	0.00	0	0.00
VII	5134	4575	↑ 12.22	35	0.68	33	0.72
VIII	437	320	↑ 36.56	1	0.23	0	0.00
IX	984	715	↑ 37.62	3	0.30	1	0.14
X	946	565	↑ 67.43	0	0.00	2	0.35
XI	262	149	↑ 75.84	2	0.76	3	2.01
XII	215	368	↓ -41.58	0	0.00	0	0.00
ARMM	119	114	↑ 4.39	1	0.84	1	0.88
CAR	1307	1404	↓ -6.91	1	0.08	0	0.00
CRG	2695	1127	↑ 139.13	0	0.00	0	0.00
NCR	93	321	↓ -71.03	0	0.00	0	0.00
Philippines	14,187	11,346	↑ 25.04	45	0.32	41	0.36

Table 1. Food & Waterborne Diseases
Philippines, 2017* vs 2016

FOOD/WATER-BORNE DISEASES	2017			2016	% Difference *2017 vs 2016
	Cases	Deaths	CFR (%)	Cases	
Acute Bloody Diarrhea	14,187	45	0.32	11,346	↑ 25.04
Confirmed Cholera	120	1	0.83	87	↑ 37.93
Confirmed Rotavirus	1,199	1	0.08	1,272	↓ -5.74
Hepatitis A	352	1	0.28	568	↓ -38.03
Typhoid	16,953	30	0.18	25,597	↓ -33.77

Fig. 1 Acute Bloody Diarrhea Cases by Morbidity Week
Philippines, January 1-September 30, 2017
2016 vs 2017*

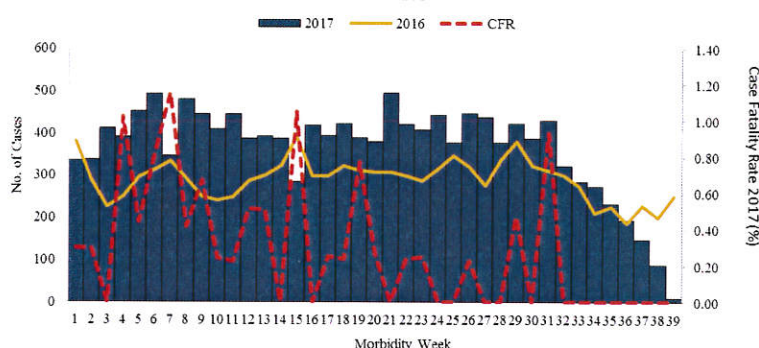


Fig. 2 Acute Bloody Diarrhea Cases by Region and Outcome (N=14,187)
Philippines, January 1-September 30, 2017

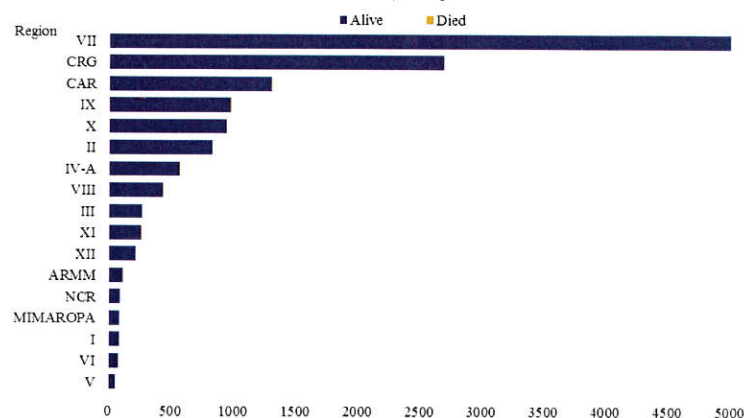
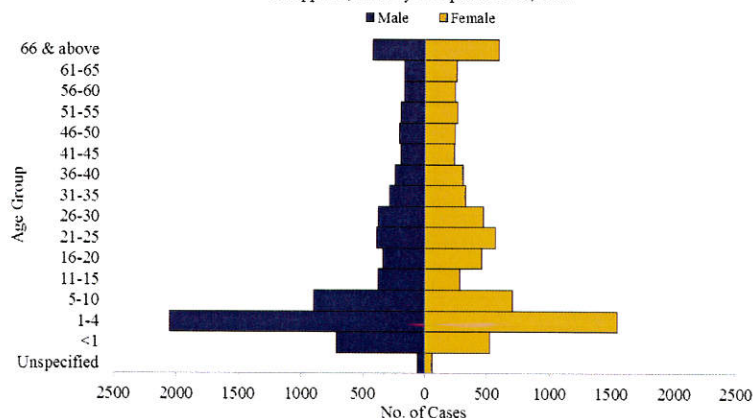


Fig. 3 Acute Bloody Diarrhea Cases by Age Group and Sex (N=14,187)
Philippines, January 1-September 30, 2017





II. Cholera

Trend in the Philippines

A total of 2,957 reported cholera cases nationwide from January 1 to September 30, 2017. Among which, 19 deaths were reported (CFR=0.64%). Of the reported cases, 120 (4.1%) cases were laboratory confirmed cholera, with 1 (CFR=0.83%) confirmed death (Table 1).

Geographical Distribution

Confirmed cases were from the following regions: Region VII (42.50%), Region IVA (20.83%), Region X (16.67%), Region V (10%), Region VI (5.83%), Region XI (3.33%), and Region IX (0.83%) (Fig.5 and Table 4).

Profile of Cases

Ages of confirmed cases ranged from 6 months to 70 years old (median= 10 years). Majority of the confirmed cases were male (60%). The most affected age group were from 5 to 10 years (29%) (Fig.6).

Laboratory Results

A total of 300 (10%) samples were referred for testing. Of these, 120 (44%) were laboratory confirmed for *vibrio cholerae*. The organisms identified among confirmed cases were *vibrio cholerae* (46%), *vibrio cholerae* *ogawa* biotype *el tor* (40%), *vibrio cholerae* *ogawa* (12%), *vibrio cholerae* 0139 (2%), and *vibrio cholerae* non 01, non 0139 (1%) (Table 3).

Table 4. Confirmed Cholera Cases & Deaths by Region
Philippines, 2017* vs 2016

Region	Cases			Deaths			
	2017	2016	% Change	2017	CFR (%)	2016	CFR (%)
I	0	16	↓1600.00	0	0.00	0	0.00
II	0	0	⇒ 0.00	0	0.00	0	0.00
III	0	3	↓300.00	0	0.00	0	0.00
IV-A	25	14	↑78.57	0	0.00	0	0.00
MIMAROPA	0	0	⇒ 0.00	0	0.00	0	0.00
V	12	12	⇒ 0.00	0	0.00	0	0.00
VI	7	0	↑700.00	0	0.00	0	0.00
VII	51	0	↑5100.00	1	1.96	0	0.00
VIII	0	26	↓2600.00	0	0.00	0	0.00
IX	1	0	↑100.00	0	0.00	0	0.00
X	20	8	↑150.00	0	0.00	0	0.00
XI	4	2	↑100.00	0	0.00	0	0.00
XII	0	0	⇒ 0.00	0	0.00	0	0.00
ARMM	0	4	↓400.00	0	0.00	0	0.00
CAR	0	2	↓200.00	0	0.00	0	0.00
CRG	0	0	⇒ 0.00	0	0.00	0	0.00
NCR	0	0	⇒ 0.00	0	0.00	0	0.00
Philippines	120	87	↑37.93	1	0.83	0	0.00

Fig. 4 Cholera Cases by Morbidity Week and Case Classification
Philippines, January 1-September 30, 2017
2016 vs 2017*

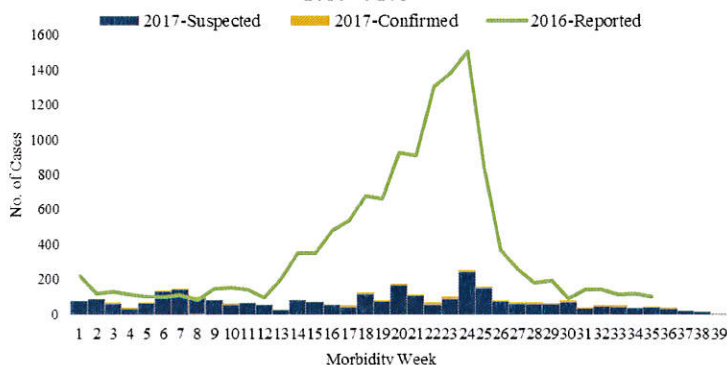


Fig. 5 Cholera Cases by Region and Case Classification (N=2,957)
Philippines, January 1-September 30, 2017

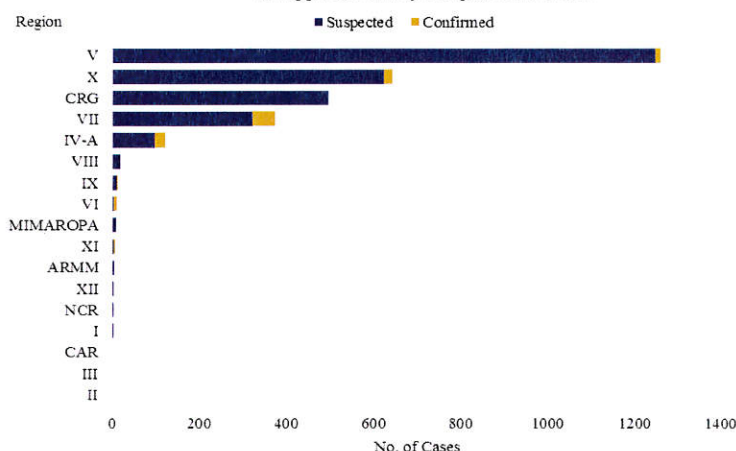


Fig. 6 Cholera Cases by Age Group, Sex and Case Classification (N=2,957)
Philippines, January 1-September 30, 2017

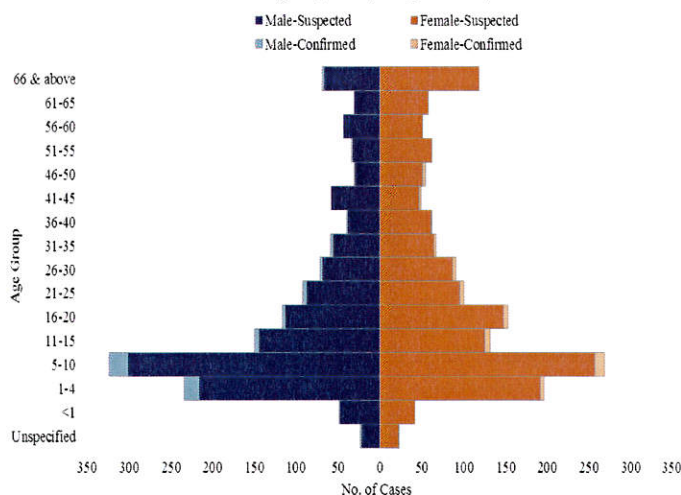


Table 3. Organisms in Cholera Cases (n=120)

Organism	Cases	%
<i>Vibrio Cholerae</i>	55	46
<i>Vibrio Cholerae Ogawa Biotype El Tor</i>	48	40
<i>Vibrio Cholerae Ogawa</i>	14	12
<i>Vibrio Cholerae</i> 0139	2	2
<i>Vibrio Cholerae</i> Non 01, Non 0139	1	1
Total	120	100



III. Hepatitis A

Trend in the Philippines

A total of 352 Hepatitis A cases reported nationwide from January 1 to September 30, 2017. Among which, 1 death was reported (CFR=0.28%). This is 38.03% lower compared to the same time period last year (568) (Table 1).

Geographical Distribution

Most of the cases were from the following regions: Region VII (27.56%), Region VI (14.49%), Region X (10.23%), NCR (9.38%) and Region IVA (6.82%) (Fig.8 and Table 5).

Profile of Cases

Ages of cases ranged from less than 1 month to 90 years old (median= 24 years). Majority of the confirmed cases were male (64%). The most affected age group were from 16 to 20 years (17%) (Fig.9).

Laboratory Results

A total of 352 (100%) samples were reactive for IgM anti-HAV.

Table 5. Hepatitis A Cases & Deaths by Region
Philippines, 2017* vs 2016

Region	Cases			Deaths			
	2017	2016	% Change	2017	CFR (%)	2016	CFR (%)
I	14	7	↑100.00	0	0.00	0	0.00
II	2	6	↓66.67	0	0.00	0	0.00
III	12	17	↓29.41	1	8.33	0	0.00
IV-A	24	46	↓47.83	0	0.00	0	0.00
MIMAROPA	1	24	↓95.83	0	0.00	0	0.00
V	9	13	↓30.77	0	0.00	0	0.00
VI	51	62	↓17.74	0	0.00	0	0.00
VII	97	161	↓39.75	0	0.00	1	0.62
VIII	4	10	↓60.00	0	0.00	0	0.00
IX	20	52	↓61.54	0	0.00	0	0.00
X	36	48	↓25.00	0	0.00	0	0.00
XI	3	8	↓62.50	0	0.00	0	0.00
XII	11	21	↓47.62	0	0.00	0	0.00
ARMM	13	26	↓50.00	0	0.00	0	0.00
CAR	8	6	↑33.33	0	0.00	0	0.00
CRG	14	11	↑27.27	0	0.00	0	0.00
NCR	33	50	↓34.00	0	0.00	1	2.00
Philippines	352	568	↓38.03	1	0.28	2	0.35

Fig. 7 Hepatitis A Cases by Morbidity Week
Philippines, January 1-September 30, 2017
2016 vs 2017*

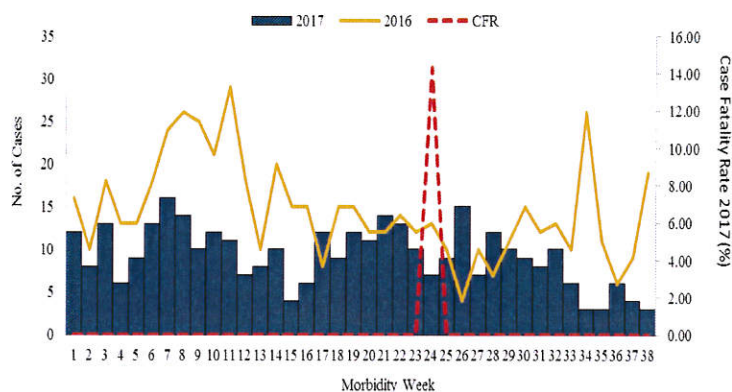


Fig. 8 Hepatitis A Cases by Region (N=352)
Philippines, January 1-September 30, 2017

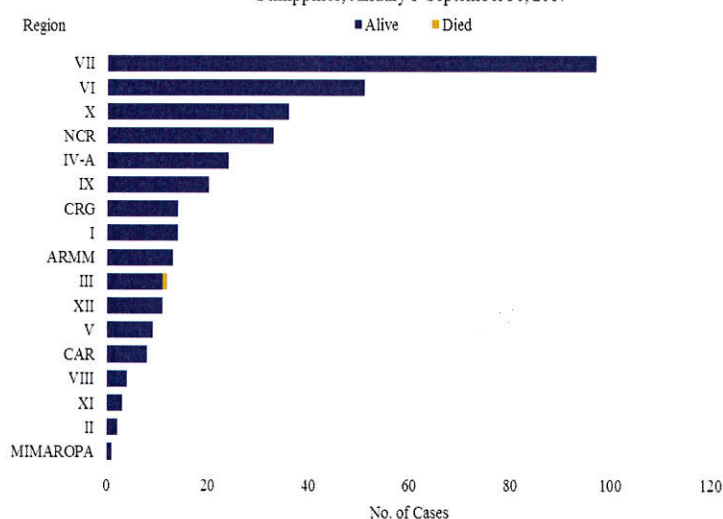
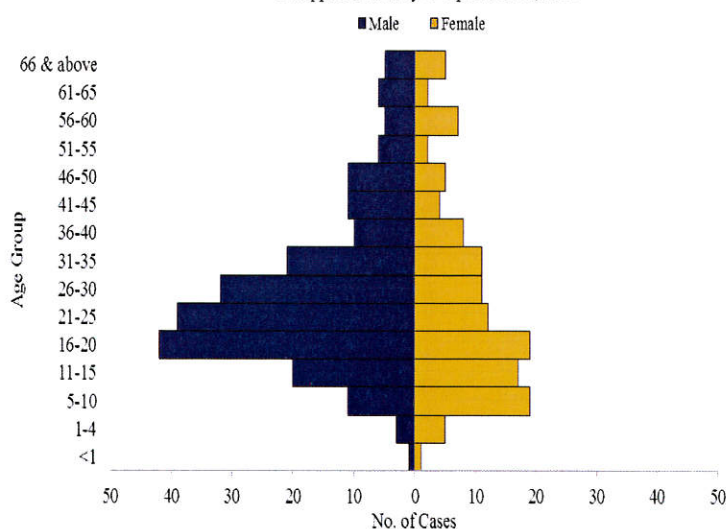


Fig. 9 Hepatitis A Cases by Age Group and Sex (N=352)
Philippines, January 1-September 30, 2017





IV. Rotavirus

Trend in the Philippines

A total of 3,132 reported rotavirus cases nationwide from January 1 to September 30, 2017. This is 24.6% lower compared to the same time period last year (4,156). Among which, 23 deaths were reported (CFR=0.73%). Of the reported cases, 1,199 (38%) cases were laboratory confirmed rotavirus with 1 case death reported (CFR=0.08%). This is 5.7% lower compared to the same time period last year (1,272) (Table 6).

Geographical Distribution

Confirmed cases were mostly from the following regions: Region I (27.94%), Region VI (22.52%), Region XII (11.84%), CARAGA (11.76%), and ARMM (9.26%) (Fig.11 and Table 6).

Profile of Cases

Ages of confirmed cases ranged from less than 1 month to 7 years old (median= 1 year). Majority of the confirmed cases were male (57%). Most of the confirmed cases belonged to 1 year old (38.87%) (Fig. 12).

Further Analysis

A total of 2,450 (78%) samples were tested. Of these, 1,199 (49%) were laboratory confirmed for rotavirus and 1,251 (51%) were negative.

Table 6. Confirmed Rotavirus Cases & Deaths by Region
Philippines, 2017* vs 2016

Region	Cases			Deaths			
	2017	2016	% Change	2017	CFR	2016	CFR
I	335	284	↑ 17.96	0	0.00	2	0.70
II	0	0	⇒ 0.00	0	0.00	0	0.00
III	1	2	↓ -50.00	0	0.00	0	0.00
IV-A	4	4	⇒ 0.00	0	0.00	0	0.00
MIMAROPA	65	18	↑ 261.11	0	0.00	0	0.00
V	53	26	↑ 103.85	0	0.00	0	0.00
VI	270	291	↓ -7.22	0	0.00	0	0.00
VII	2	0	↑ 200.00	0	0.00	0	0.00
VIII	0	30	↓ -3000.00	0	0.00	0	0.00
IX	0	69	↓ -6900.00	0	0.00	0	0.00
X	0	0	⇒ 0.00	0	0.00	0	0.00
XI	2	0	↑ 200.00	0	0.00	0	0.00
XII	142	158	↓ -10.13	0	0.00	0	0.00
ARMM	111	194	↓ -42.78	1	0.90	1	0.52
CAR	0	0	⇒ 0.00	0	0.00	0	0.00
CARAGA	141	96	↑ 46.88	0	0.00	0	0.00
NCR	73	100	↓ -27.00	0	0.00	0	0.00
Philippines	1,199	1,272	↓ -5.74	1	0.08	3	0.24

Fig. 10 Rotavirus Cases by Morbidity Week and Case Classification.
Philippines, January 1- September 30, 2017
2017* vs 2016

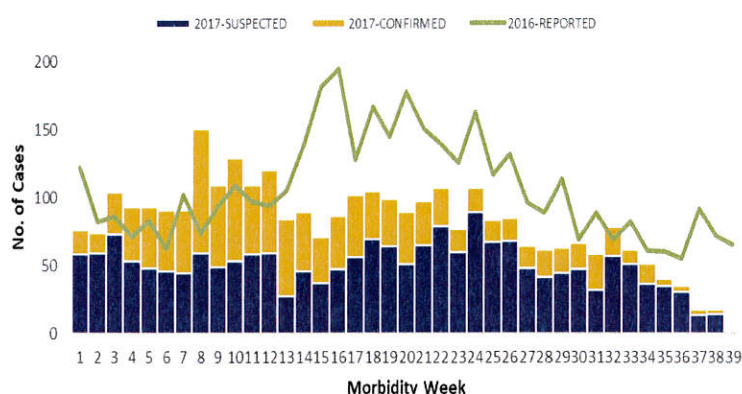


Fig. 11 Rotavirus Cases by Region and Case Classification (N=3,132)
Philippines, January 1- September 30, 2017

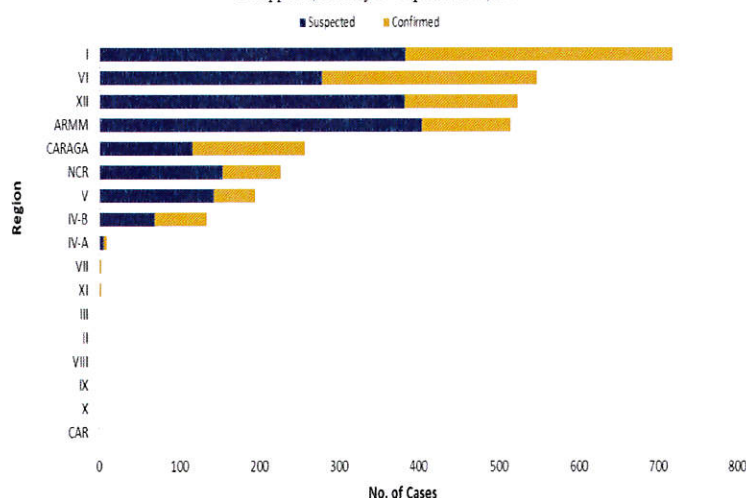
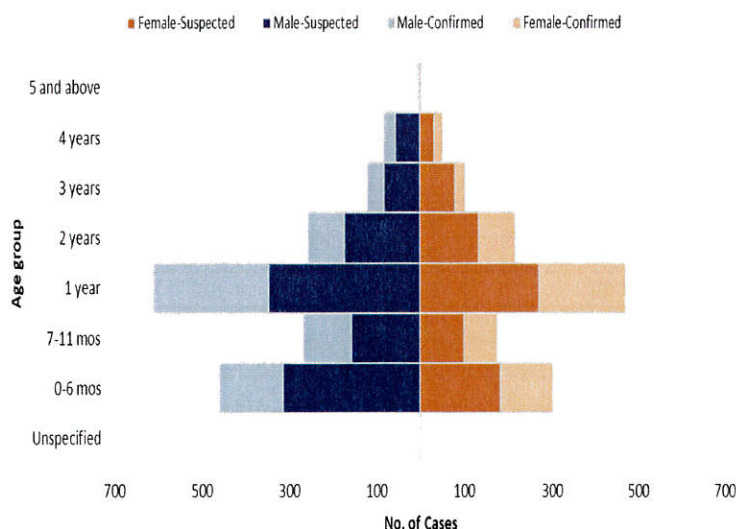


Fig. 12 Rotavirus Cases by Age group, Sex and Case Classification (N=3,132)
Philippines, January 1 - September 30, 2017





V. Typhoid

Trend in the Philippines

A total of 16,953 reported typhoid cases were reported nationwide from January 1 to September 30, 2017 with 30 deaths (CFR=0.18%). This is 33.77% lower compared to the same time period last year (25,597) (Table 1). Of the reported cases, 282 (1.66%) cases were confirmed typhoid with 1 death (CFR=0.35%). This is 10.16% higher compared to the same time period last year (256).

Geographical Distribution

Most of the reported cases were from the following regions: Region X (20.04%), XII (11.40%), CAR (9.51%), Region VI (9.38%), and Region IVA (7.19%). However, the top 5 regions with confirmed typhoid case were the following: Region VIII (45.39%), Region VII (10.99%), Region X (8.16%), Region IVA (7.45%) and Region IX (4.61%) (Fig.14 and Table 7).

Profile of Cases

Ages of reported cases ranged from less than 1 month to 106 years old (median= 17 years). Majority of cases were male (52.35%). The most affected age group were from 5 to 10 years old (19.96%) (Fig.15).

Further Analysis

A total of 13,773 (81%) samples were referred for testing. Of these, 11,856 (86%) were positive for tubex, typhi dot, widal and RDT, 282 (2%) were tested with positive culture for salmonella typhi, and 1,635 (12%) were tested negative.

Table 7. Typhoid Cases & Deaths by Region
Philippines, 2017* vs 2016

Region	Cases			Deaths			
	2017	2016	% Change	2017	CFR	2016	CFR
I	974	1,646	↓-40.83	1	0.10	0	0.00
II	477	557	↓-14.36	1	0.21	1	0.18
III	499	1,117	↓-55.33	0	0.00	0	0.00
IV-A	1,219	1,661	↓-26.61	0	0.00	1	0.06
MIMAROPA	247	779	↓-68.29	1	0.40	2	0.26
V	302	262	↑15.27	1	0.33	3	1.15
VI	1,590	2,615	↓-39.20	4	0.25	5	0.19
VII	1,141	992	↑15.02	10	0.88	7	0.71
VIII	411	481	↓-14.55	2	0.49	0	0.00
IX	1,044	1,503	↓-30.54	3	0.29	7	0.47
X	3,398	4,502	↓-24.52	0	0.00	1	0.02
XI	198	193	↑2.59	0	0.00	0	0.00
XII	1,933	3,455	↓-44.05	1	0.05	1	0.03
ARMM	831	1,191	↓-30.23	6	0.72	2	0.17
CAR	1,612	3,599	↓-55.21	0	0.00	2	0.06
CARAGA	769	739	↑4.06	0	0.00	1	0.14
NCR	308	305	⇒0.98	0	0.00	3	0.98
Philippines	16,953	25,597	↓-33.77	30	0.18	36	0.14

Fig. 13 Reported Typhoid Cases by Morbidity Week
Philippines, January 1- September 30, 2017
2016 vs 2017*

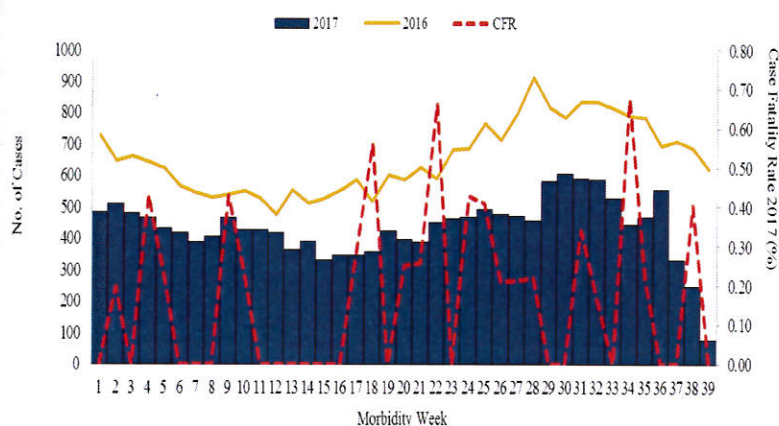


Fig. 14 Typhoid Cases by Region and Case Classification
Philippines, January 1 - September 30, 2017 (N=16,953)

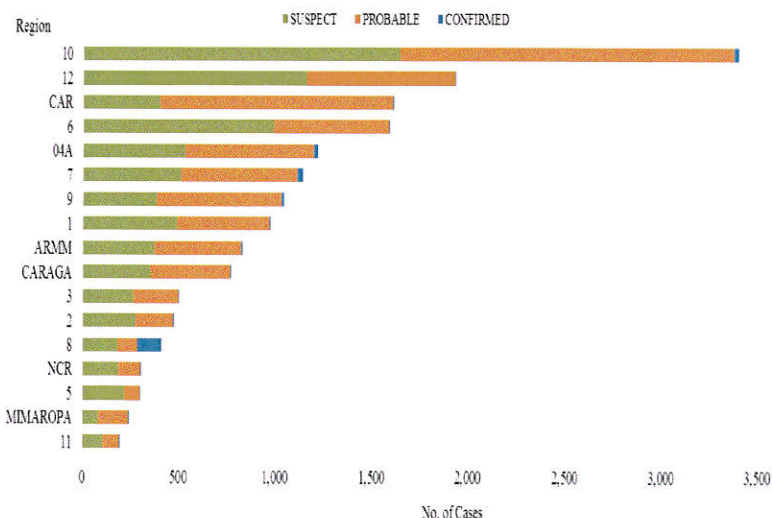
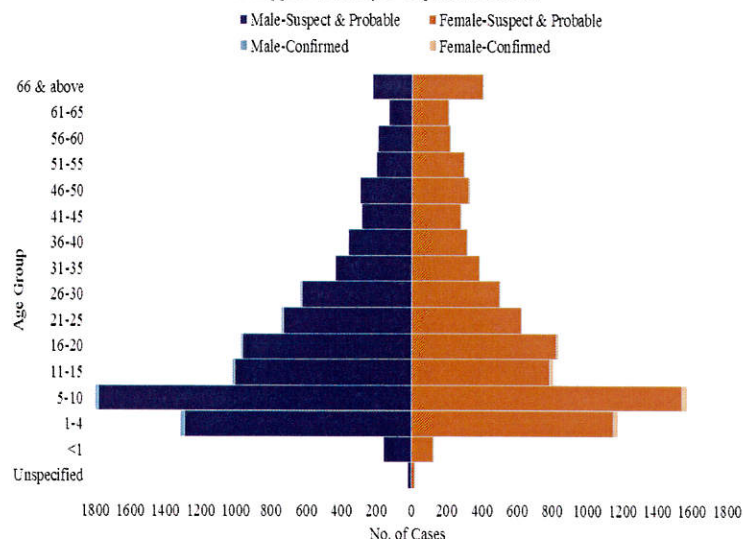


Fig. 15 Typhoid Cases by Age Group, Sex and Case Classification (N=16,953)
Philippines, January 1 - September 30, 2017






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