



## 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 2,976 acute bloody diarrhea cases were reported nationwide from January 1 to March 4, 2017. This is 13.07% higher compared to the same time period last year (2,632) (Table 1). There were 15 reported deaths (CFR=0.50%) (Table 2).

#### Geographical Distribution

Most of the reported cases were from the following regions: Region VII (48.72%), CAR (9.51%), CARAGA (7.16%), Region VIII (6.62%), and Region IX (6.32%) (Fig.2 and Table 2).

#### Profile of Cases

Ages of cases ranged from less than 1 month to 98 years old (median= 13 years). Majority of cases were male (50.3%). The most affected age group were from less than 1 year (27%) (Fig.3).

#### Further Analysis

A total of 1,572 (53%) samples were referred for testing. Of these, 1,391 (88%) were laboratory confirmed with different organisms. The top organisms identified were *entamoeba histolytica* (89.7%), *trophozoites* (3.1%), and *escherichia coli* (2.2%).

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

Region	Cases			Deaths			
	2017	2016	% Change	2017	CFR (%)	2016	CFR (%)
I	4	15	↓-73.33	0	0.00	0	0.00
II	114	248	↓-54.03	0	0.00	0	0.00
III	37	59	↓-37.29	0	0.00	0	0.00
IV-A	82	36	↑127.78	1	1.22	0	0.00
MIMAROPA	23	17	↑35.29	0	0.00	0	0.00
V	30	2	↑1400.00	0	0.00	0	0.00
VI	15	13	↑15.38	0	0.00	0	0.00
VII	1450	1015	↑42.86	9	0.62	12	1.18
VIII	197	96	↑105.21	1	0.51	0	0.00
IX	188	149	↑26.17	2	1.06	1	0.67
X	169	149	↑13.42	0	0.00	0	0.00
XI	90	29	↑210.34	2	2.22	1	3.45
XII	39	77	↓-49.35	0	0.00	0	0.00
ARMM	19	17	↑11.76	0	0.00	0	0.00
CAR	283	388	↓-27.06	0	0.00	0	0.00
CARAGA	213	265	↓-19.62	0	0.00	0	0.00
NCR	23	57	↓-59.65	0	0.00	0	0.00
Philippines	2976	2632	↑13.07	15	0.50	14	0.53

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	2,976	15	0.50	2,632	↑ 13.07
Confirmed Cholera	12	0	0.00	11	↑ 9.09
Confirmed Rotavirus	246	0	0.00	216	↑ 13.89
Hepatitis A	98	0	0.00	163	↓ -39.88
Typhoid	3,505	5	0.14	5,474	↓ -35.97

Fig. 1 Acute Bloody Diarrhea Cases by Morbidity Week  
Philippines, as of March 4, 2017  
2016 vs 2017\*

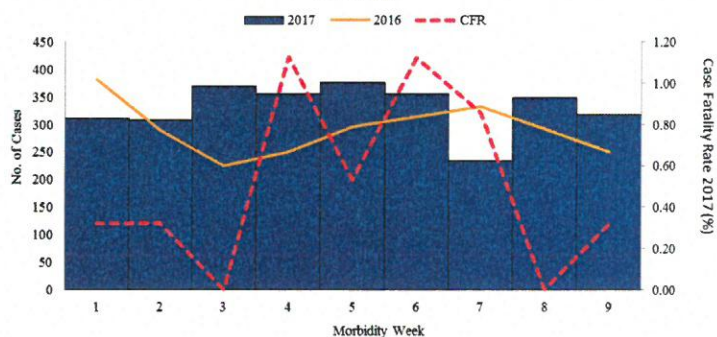


Fig. 2 Acute Bloody Diarrhea Cases by Region and Outcome (N=2,976)  
Philippines, as of March 4, 2017

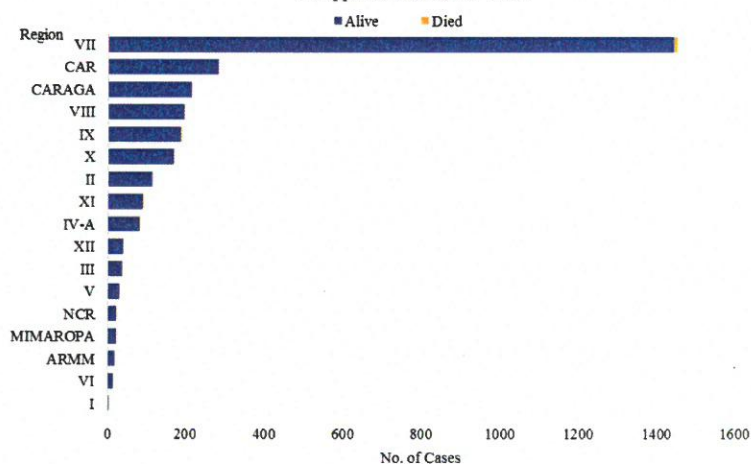
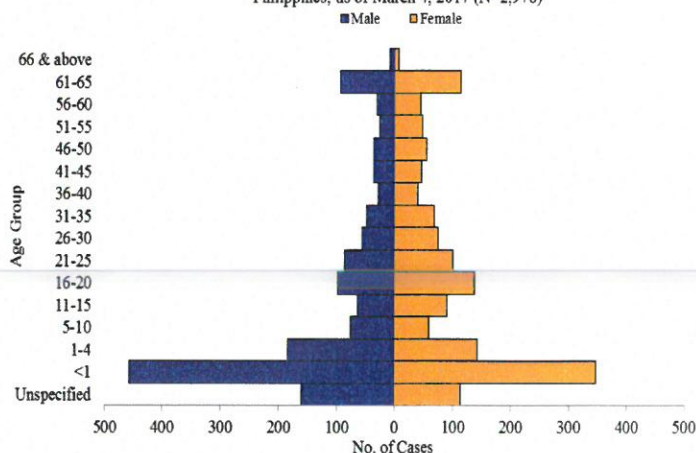


Fig. 3 Acute Bloody Diarrhea Cases by Age Group and Sex  
Philippines, as of March 4, 2017 (N=2,976)







## II. Cholera

### Trend in the Philippines

A total of 656 reported cholera cases nationwide from January 1 to March 4, 2017. Among which, 5 deaths were reported (CFR=0.76%). Of the reported cases, 12 (1.83%) cases were laboratory confirmed cholera, no deaths reported. This is 9.09% higher compared to the same time period last year (11) (Table 1).

### Geographical Distribution

Confirmed cases were from the following regions: Region VII (75%), Region XI (17%), and Region VI (8%) (Fig.5 and Table 4).

### Profile of Cases

Ages of confirmed cases ranged from less than 1 month to 47 years old (median= 4 years). Majority of the confirmed cases were male (67%). The most affected age group were from 1 year to 4 years (58%) (Fig.6).

### Further Analysis

A total of 18 (3%) samples were referred for testing. Of these, 12 (67%) were laboratory confirmed for *vibrio cholerae*. The organisms identified among confirmed cases were *vibrio cholerae* (75%), *vibrio cholerae* ogawa biotype el tor (17%), and *vibrio cholerae* ogawa (8%) (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	0	⇒ 0.00	0	0.00	0	0.00
II	0	0	⇒ 0.00	0	0.00	0	0.00
III	0	0	⇒ 0.00	0	0.00	0	0.00
IV-A	0	10	↓ 1000.00	0	0.00	0	0.00
MIMAROPA	0	0	⇒ 0.00	0	0.00	0	0.00
V	0	1	↓ 100.00	0	0.00	0	0.00
VI	1	0	↑ 100.00	0	0.00	0	0.00
VII	9	0	↑ 900.00	0	0.00	0	0.00
VIII	0	0	⇒ 0.00	0	0.00	0	0.00
IX	0	0	⇒ 0.00	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	0	0	⇒ 0.00	0	0.00	0	0.00
ARMM	0	0	⇒ 0.00	0	0.00	0	0.00
CAR	0	0	⇒ 0.00	0	0.00	0	0.00
CARAGA	0	0	⇒ 0.00	0	0.00	0	0.00
NCR	0	0	⇒ 0.00	0	0.00	0	0.00
Philippines	12	11	↑ 9.09	0	0.00	0	0.00

Fig. 4 Cholera Cases by Morbidity Week and Case Classification Philippines, as of March 4, 2017 2016 vs 2017\*

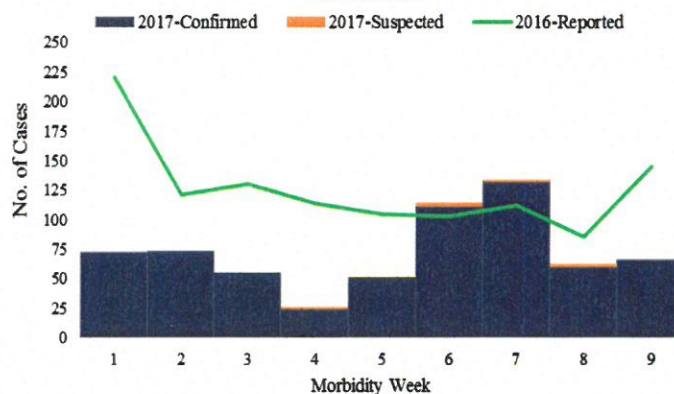


Fig. 5 Cholera Cases by Region and Case Classification (N=656) Philippines, as of March 4, 2017

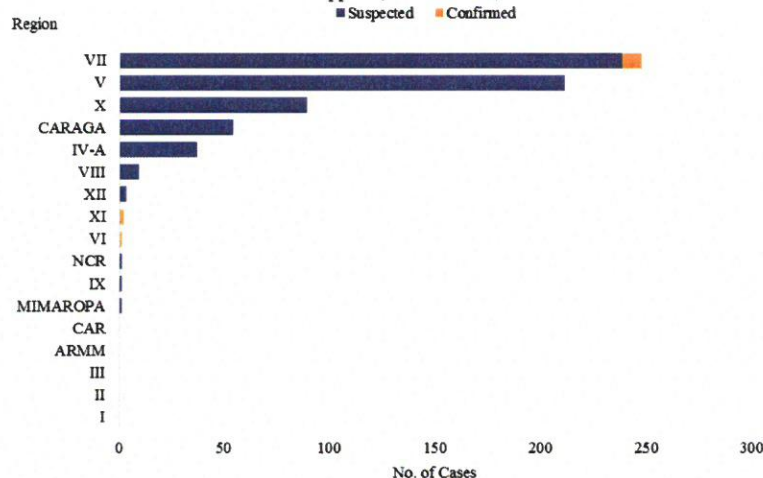


Fig. 6 Cholera Cases by Age Group, Sex and Case Classification (N=656) Philippines, as of March 4, 2017

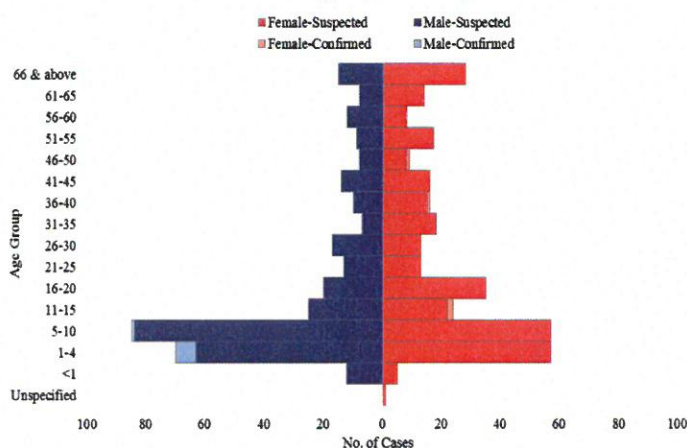


Table 3. Organisms in Cholera Cases (n=12)

Organism	Cases	%
<i>Vibrio Cholerae</i>	9	75
<i>Vibrio Cholerae</i> Ogawa Biotype El Tor	2	17
<i>Vibrio Cholerae</i> Ogawa	1	8
Total	12	100





### III. Hepatitis A

#### Trend in the Philippines

A total of 98 Hepatitis A cases reported nationwide from January 1 to March 4, 2017 with no reported deaths. This is 39.88% lower compared to the same time period last year (163) (Table 1).

#### Geographical Distribution

Most of the cases were from the following regions: Region VII (19.4%), Region VI (14.3%), NCR and Region X (11.2%), ARMM and Region IX (8.2%) (Fig.8 and Table 5).

#### Profile of Cases

Ages of cases ranged from less than 1 month to 66 years old (median= 24 years). Majority of the confirmed cases were male (70.4%). The most affected age group were from 11 to 15 years (17%) (Fig.9).

#### Further Analysis

A total of 98 (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	5	2	↑150.00	0	0.00	0	0.00
II	0	2	↓200.00	0	0.00	0	0.00
III	3	5	↓40.00	0	0.00	0	0.00
IV-A	4	9	↓55.56	0	0.00	0	0.00
MIMAROPA	0	10	↓1000.00	0	0.00	0	0.00
V	3	0	↑300.00	0	0.00	0	0.00
VI	14	19	↓26.32	0	0.00	0	0.00
VII	19	50	↓62.00	0	0.00	0	0.00
VIII	3	4	↓25.00	0	0.00	0	0.00
IX	8	19	↓57.89	0	0.00	0	0.00
X	11	12	↓8.33	0	0.00	0	0.00
XI	0	2	↓200.00	0	0.00	0	0.00
XII	1	5	↓80.00	0	0.00	0	0.00
ARMM	8	5	↑60.00	0	0.00	0	0.00
CAR	3	1	↑200.00	0	0.00	0	0.00
CARAGA	5	2	↑150.00	0	0.00	0	0.00
NCR	11	16	↓31.25	0	0.00	1	6.25
Philippines	98	163	↓39.88	0	0.00	1	0.61

Fig. 7 Hepatitis A Cases by Morbidity Week  
Philippines, as of March 4, 2017  
2016 vs 2017\*

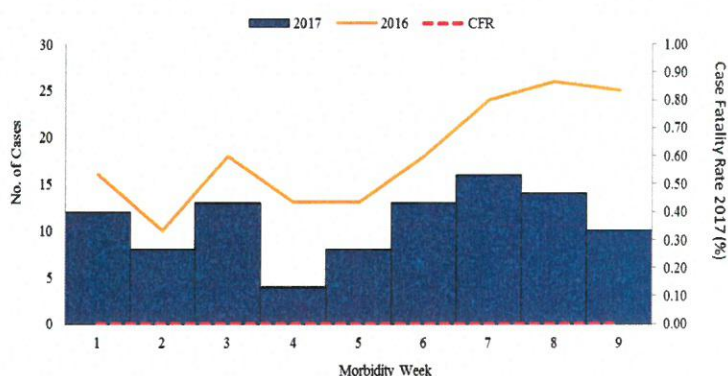


Fig. 8 Hepatitis A Cases by Region (N=98)  
Philippines, as of March 4, 2017

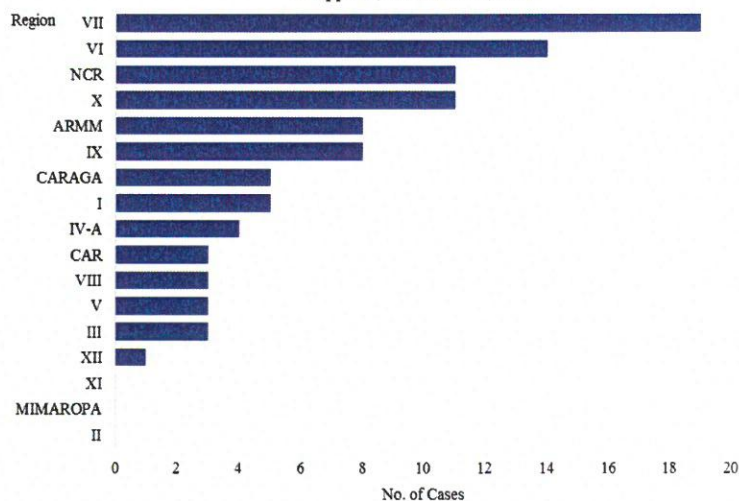
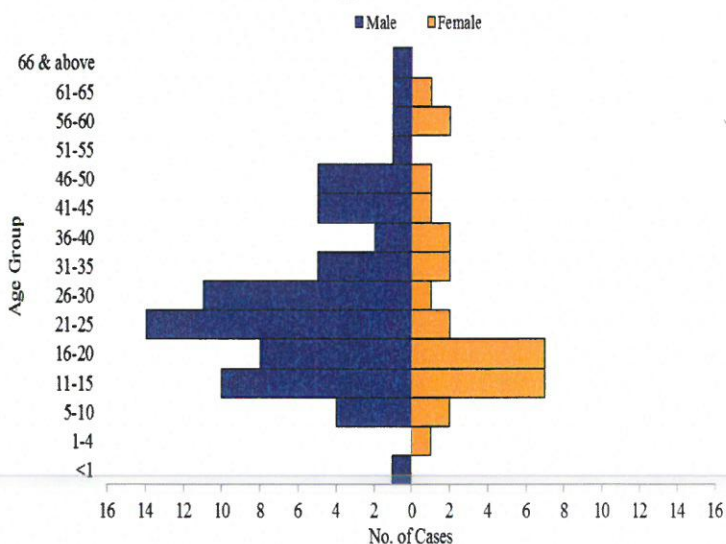


Fig. 9 Hepatitis A Cases by Age Group and Sex (N=98)  
Philippines, as of March 4, 2017







#### IV. Rotavirus

##### Trend in the Philippines

A total of 768 reported rotavirus cases nationwide from January 1 to March 4, 2017. Among which, 4 deaths were reported (CFR=0.52%). Of the reported cases, 246 (32.03%) cases were laboratory confirmed rotavirus, no deaths reported. This is 13.89% higher compared to the same time period last year (216) (Table 6).

##### Geographical Distribution

Confirmed cases were from the following regions: Region I (40.24%), NCR (20.73%), Region VI (19.92%), CARAGA (9.35%) and Region XII (4.07%) (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 (58.9%). Most of the cases belonged to 1 year old (35.77%) (Fig. 12).

##### Further Analysis

A total of 445 (58%) samples were tested. Of these, 246 (40%) were laboratory confirmed for rotavirus while 199 (33%) 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	99	23	↑330.43	0	0.00	0	0.00
II	0	0	⇒ 0.00	0	0.00	0	0.00
III	0	1	↓-100.00	0	0.00	0	0.00
IV-A	1	0	↑100.00	0	0.00	0	0.00
MIMAROPA	0	0	⇒ 0.00	0	0.00	0	0.00
V	7	1	↑600.00	0	0.00	0	0.00
VI	49	44	↑11.36	0	0.00	0	0.00
VII	0	0	⇒ 0.00	0	0.00	0	0.00
VIII	0	0	⇒ 0.00	0	0.00	0	0.00
IX	0	0	⇒ 0.00	0	0.00	0	0.00
X	0	0	⇒ 0.00	0	0.00	0	0.00
XI	0	0	⇒ 0.00	0	0.00	0	0.00
XII	10	35	↓-71.43	0	0.00	0	0.00
ARMM	6	45	↓-86.67	0	0.00	0	0.00
CAR	0	0	⇒ 0.00	0	0.00	0	0.00
CARAGA	23	25	↓-8.00	0	0.00	0	0.00
NCR	51	42	↑21.43	0	0.00	0	0.00
Philippines	246	216	↑13.89	0	0.00	0	0.00

Fig. 10 Confirmed Rotavirus Cases by Morbidity Week and Case Classification, Philippines, as of March 4, 2017  
2016 vs 2017\*

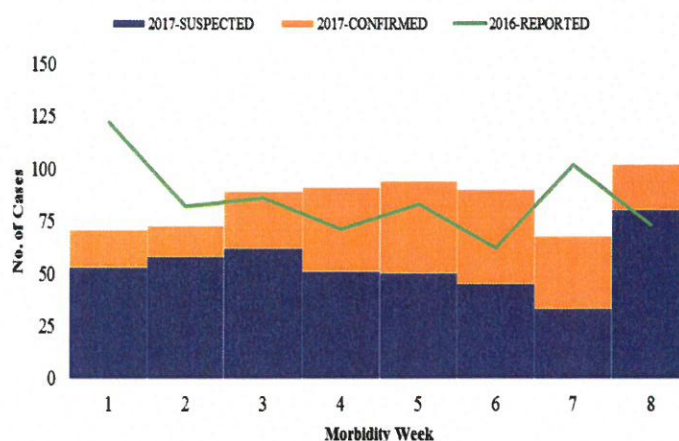


Fig. 11 Rotavirus Cases by Region and Case Classification (N=768)  
Philippines, as of March 4, 2017

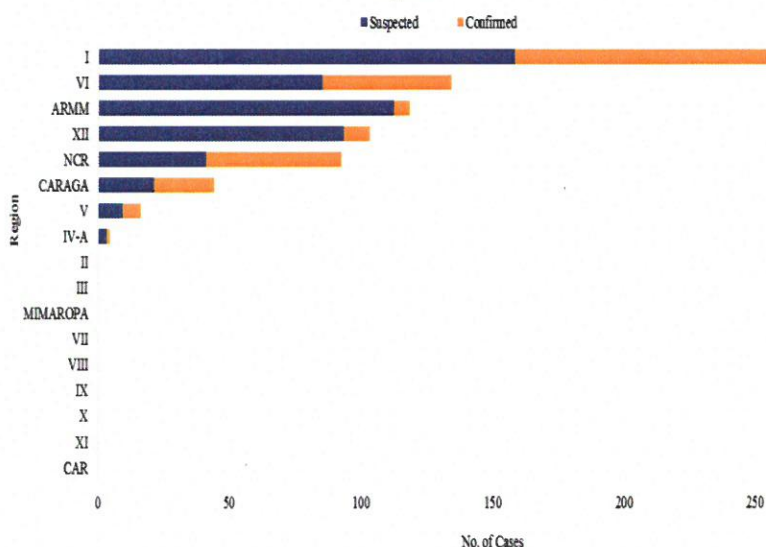
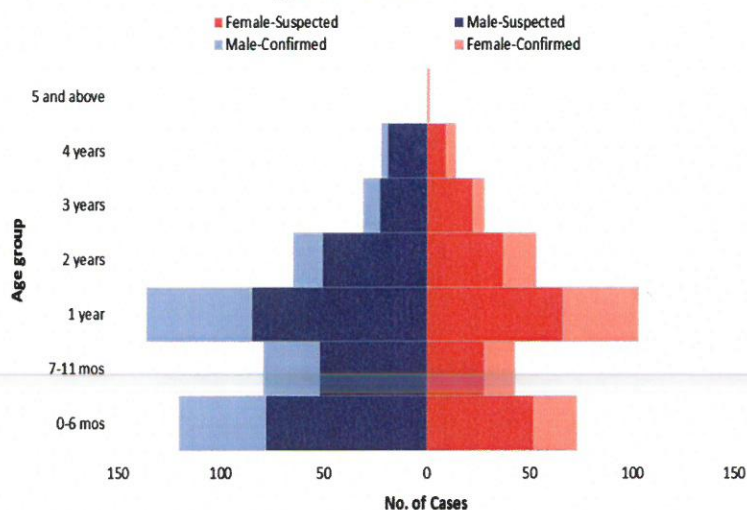


Fig. 12 Rotavirus Cases by Age group, Sex and Case Classification (N=768)  
Philippines, as of March 4, 2017







## V. Typhoid

### Trend in the Philippines

A total of 3,505 reported typhoid cases were reported nationwide from January 1 to March 4, 2017 with 5 deaths (CFR=0.14%). This is 35.97% lower compared to the same time period last year (5,474) (Table 1).

### Geographical Distribution

Most of the reported cases were from the following regions: Region X (20.77%), VI (10.96%), CAR (9.47%), Region XII (9.30%), and Region IVA (6.96%) (Table 7.). However, the top 5 regions with confirmed typhoid case were the following: Region VIII & NCR (17.74%), Region IVA & Region VII (12.90%) and Region IVB (11.29%) (Fig.14).

### Profile of Cases

Ages of cases ranged from less than 1 month to 97 years old (median= 18 years). Majority of cases were male (52.1%). The most affected age group were from 5 to 10 years old (19%) (Fig.15).

### Further Analysis

A total of 2,804 (80%) samples were referred for testing. Of these, 62 (2%) were tested with positive culture for salmonella typhi, 2,429 (87%) were positive for tubex, typhi dot and widal, and 313 (11%) 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	186	329	↓-43.47	0	0.00	0	0.00
II	56	181	↓-69.06	1	1.79	0	0.00
III	65	243	↓-73.25	0	0.00	0	0.00
IV-A	244	597	↓-59.13	0	0.00	0	0.00
MIMAROPA	86	91	↓-5.49	1	1.16	0	0.00
V	89	76	↑17.11	1	1.12	0	0.00
VI	384	496	↓-22.58	0	0.00	0	0.00
VII	203	190	↑6.84	0	0.00	3	1.58
VIII	64	150	↓-57.33	0	0.00	0	0.00
IX	239	401	↓-40.40	1	0.42	1	0.25
X	728	1,036	↓-29.73	0	0.00	1	0.10
XI	44	63	↓-30.16	0	0.00	0	0.00
XII	326	568	↓-42.61	1	0.31	0	0.00
ARMM	235	199	↑18.09	0	0.00	1	0.50
CAR	332	569	↓-41.65	0	0.00	1	0.18
CARAGA	129	216	↓-40.28	0	0.00	0	0.00
NCR	95	69	↑37.68	0	0.00	0	0.00
Philippines	3505	5474	↓-35.97	5	0.14	7	0.13

Fig. 13 Reported Typhoid Cases by Morbidity Week, Philippines, as of March 4, 2017  
2016 vs 2017\*

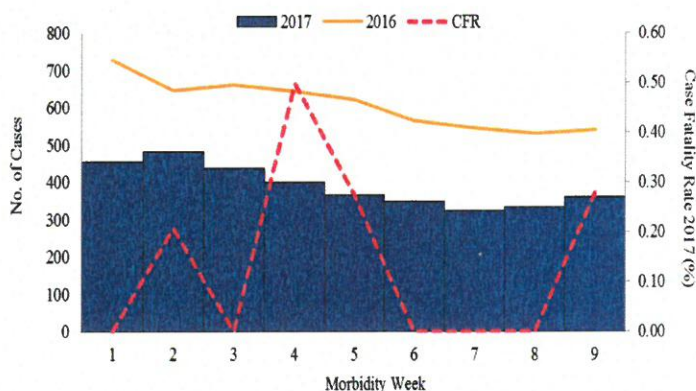


Fig. 14 Typhoid Case Classification by Region Philippines, as of March 4, 2017 (N=3,505)

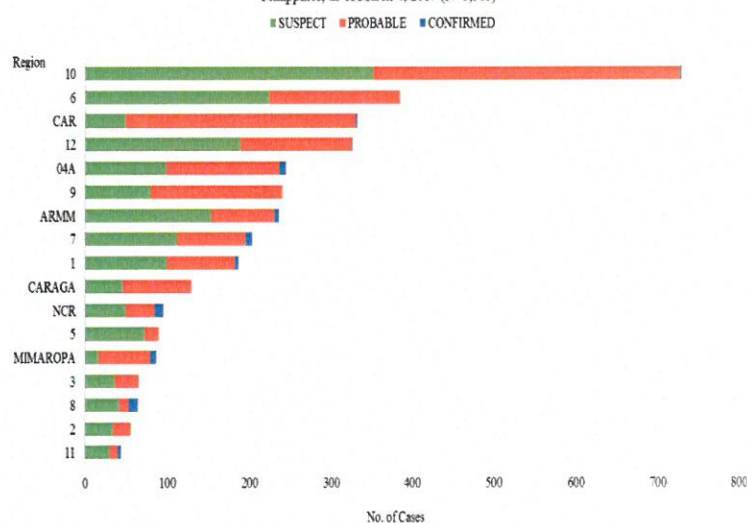
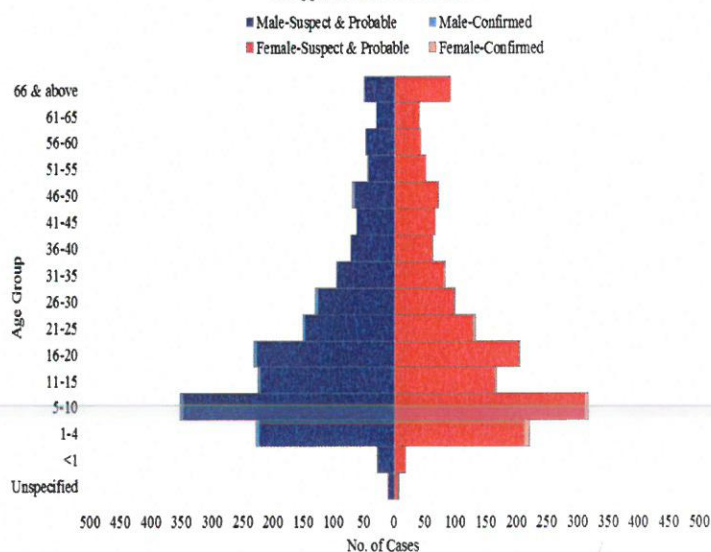


Fig. 15 Typhoid Cases by Age Group, Sex and Case Classification (N=3,505)  
Philippines, as of March 4, 2017






Department of Health  
Epidemiology Bureau  
Public Health Surveillance Division

**Food and Waterborne Diseases**  
(January 1 to March 4, 2017)

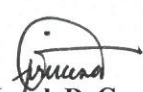
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