Republic of the Philippines
Department of Health
Kagawaran ng Kalusugan

Monthly Dengue Report
Report No. 12

Epidemiology Bureau
Public Health Surveillance Division

January to December 2018

Dengue Surveillance Update

Dengue fever and the more severe form, dengue hemorrhagic fever, are caused by any of the four serotypes of dengue virus (types 1, 2, 3, and 4). An infected day-biting female Aedes mosquito transmits this viral disease to humans. This report provides data from the period of January 1 to December 31, 2018 or Morbidity Weeks 1 – 52.

PIDSR Case Definition for Dengue Diseases

Clinical Classification
- **Dengue Without Warning Signs**
  A previously well person with acute febrile illness of 2-7 days duration plus two of the following:
    - Headache
    - Body malaise
    - Myalgia
    - Arthralgia
    - Retro-orbital pain
    - Anorexia
    - Nausea
    - Vomiting
    - Diarrhea
    - Flushed skin
    - Rash (petecheal, Herman's sign)
- **Dengue With Warning Signs**
  A previously well person with acute febrile illness of 2-7 days duration plus any one of the following:
  - Abdominal pain or tenderness
  - Persistent vomiting
  - Clinical signs of fluid accumulation
  - Mucosal bleeding
  - Lethargy, restlessness
  - Liver enlargement
  - Laboratory: increase in Hct and/or decreasing platelet count
- **Severe Dengue**
  A previously well person with acute febrile illness of 2-7 days duration and any of the clinical manifestations for dengue with or without warning signs,
  Plus any of the following:
    Severe plasma leakage leading to
      - Shock
      - Fluid accumulation with respiratory distress
    Severe bleeding
    Severe organ impairment
      - Liver: AST or ALT $\geq$1000
      - CNS: e.g. seizures, impaired consciousness
      - Heart: e.g. myocarditis
      - Kidneys: e.g. renal failure

Case Classification
- **Suspect**
  A previously well person with acute febrile illness of 2-7 days duration with clinical signs and symptoms of dengue
- **Probable**
  A suspect case plus:
  Laboratory test, at least CBC (leucopenia with or without thrombocytopenia) and/or Dengue NS1, antigen test or dengue IgM antibody test (optional)
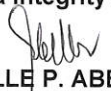- **Confirmed**
  - Viral culture isolation,
  - Polymerase Chain Reaction
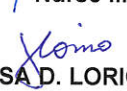
Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases. All 2018 data reflects partial data only of all regions, subject to change once annual 2018 data is completed. Percentages may not equal to 100 due to rounding off of figures. A PDF file of this report is available at www.doh.gov.ph/statistics.

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## I. Trend in the Philippines

A total of **216,190** Dengue cases were reported nationwide from January 1 to December 31, 2018. This is **42%** higher compared to the same period last year **(152,224).** Figure 1 shows weekly data of reported dengue cases in 2018 compared to 5-year average same time period.

**Figure 1. Reported Dengue Cases by Morbidity Week vs 5-Year Average
Philippines, January 1 - December 31, 2018 (N=216,190)**
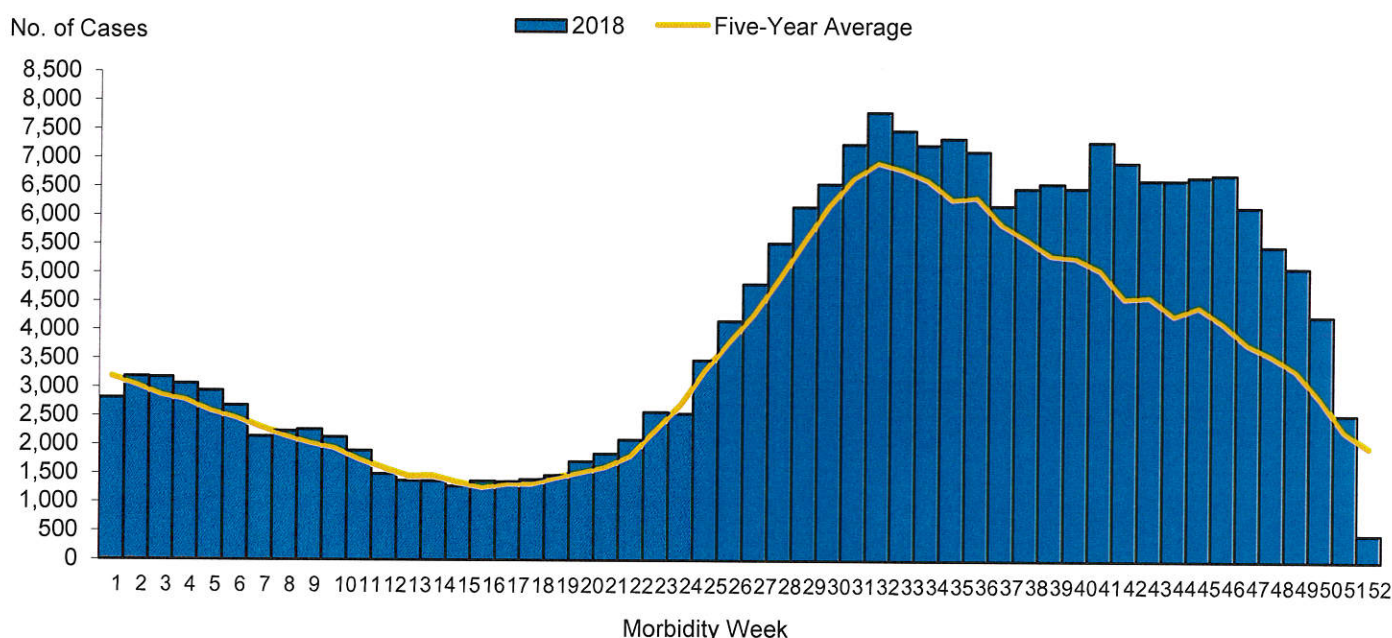
II. Geographic Distribution

Table 1 shows that majority of the cases were from the following regions: **Region III** (14%), **NCR** (13%) **Region IV-A** (12%), and **Region VII** (10%).

The regions with the highest percent increase in the number of reported cases for this year compared to last year were: **ARMM** (421%), **CARAGA** (162%), **MIMAROPA** (159%), **Region X** (122%), **Region VIII** (115%), **Region II** (90%), **Region I** (72%), **Region XI** (66%), and **CAR** (57%).

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Table 1. Reported Dengue Cases by Region
**Philippines, January 1 – December 31, 2018 vs January 1 – December 31, 2017**

Region	2018		2017		% Change of Reported Cases
	Cases	Deaths	Cases	Deaths	
PHILIPPINES	216,190	1083	152,224	811	↑ 42
I	14,103, (7%)	52, (5%)	8,206, (5%)	23, (3%)	↑ 72
II	10,092, (5%)	44, (4%)	5,306, (3%)	34, (4%)	↑ 90
III	30,814, (14%)	76, (7%)	24,865, (16%)	82, (10%)	↑ 24
IV-A	25,705, (12%)	135, (12%)	22,318, (15%)	104, (13%)	↑ 15
MIMAROPA	7,091, (3%)	49, (5%)	2,735, (2%)	14, (2%)	↑ 159
V	3,464, (2%)	34, (3%)	3,190, (2%)	26, (3%)	↑ 9
VI	16,122, (7%)	93, (9%)	10,302, (7%)	86, (11%)	↑ 56
VII	20,679, (10%)	128, (12%)	13,735, (9%)	119, (15%)	↑ 51
VIII	9,205, (4%)	49, (5%)	4,285, (3%)	24, (3%)	↑ 115
IX	6,307, (3%)	63, (6%)	4,607, (3%)	27, (3%)	↑ 37
X	14,803, (7%)	70, (6%)	6,671, (4%)	24, (3%)	↑ 122
XI	5,906, (3%)	19, (2%)	3,551, (2%)	25, (3%)	↑ 66
XII	8,138, (4%)	30, (3%)	9,432, (6%)	37, (5%)	↓14
ARMM	2,364, (1%)	25, (2%)	454, (0.3%)	2, (0.2%)	↑ 421
CAR	6,329, (3%)	11, (1%)	3,991, (3%)	13, (2%)	↑ 59
CARAGA	7,028, (3%)	25, (2%)	2,679, (2%)	13, (2%)	↑ 162
NCR	28,040, (13%)	180, (17%)	25,897, (17%)	158, (19%)	↑ 8

III. Profile of Cases

A. Profile of Reported Dengue Cases

Age of suspect cases ranged from less than 1 month to 99 years (median age of 13 years). Majority of the cases (113,880, 53%) were male. Most of the cases belonged to the 10-14 years age group (46,333, 21%) (Figure 2).

Figure 2. Reported Dengue Cases by Age Group and Sex (N= 216,190)
Philippines, January 1 – December 31, 2018
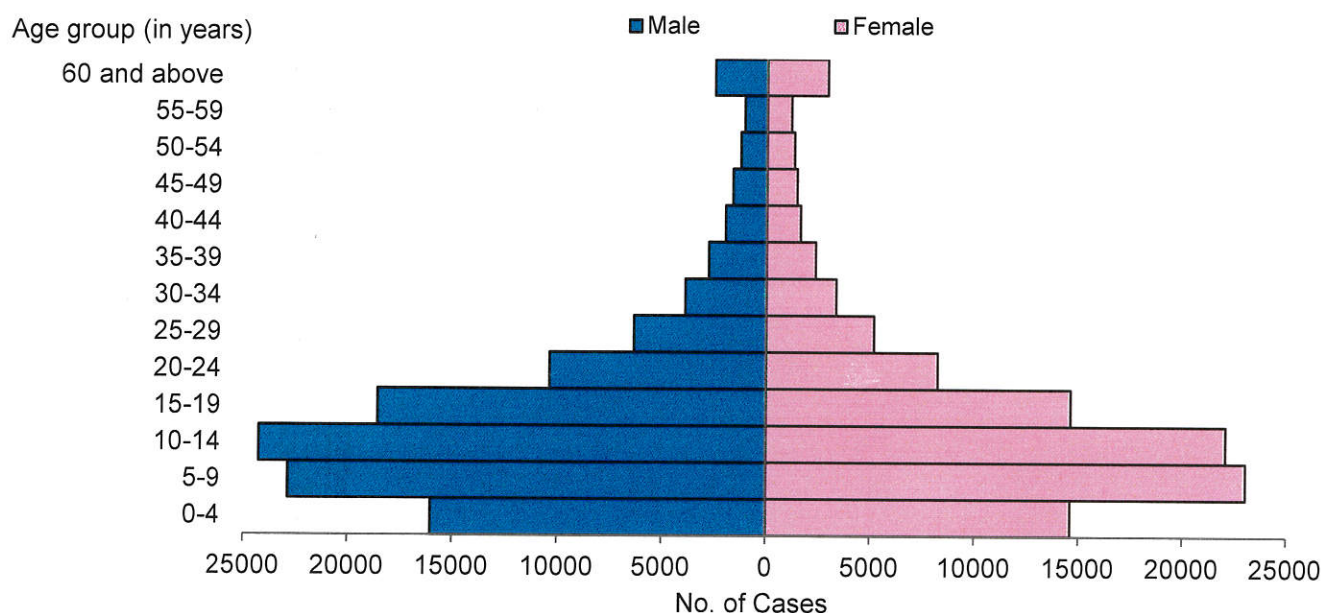
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B. Profile of Confirmed Dengue Cases

Out of 216,190 reported Dengue cases nationwide, **98,053 (45%) cases** were tested. Out of the tested, **998 (1%) cases** were confirmed via PCR.

Figure 3. Confirmed Dengue Cases by Morbidity Week (n=998)
Philippines, January 1 – December 31, 2018

No. of Cases

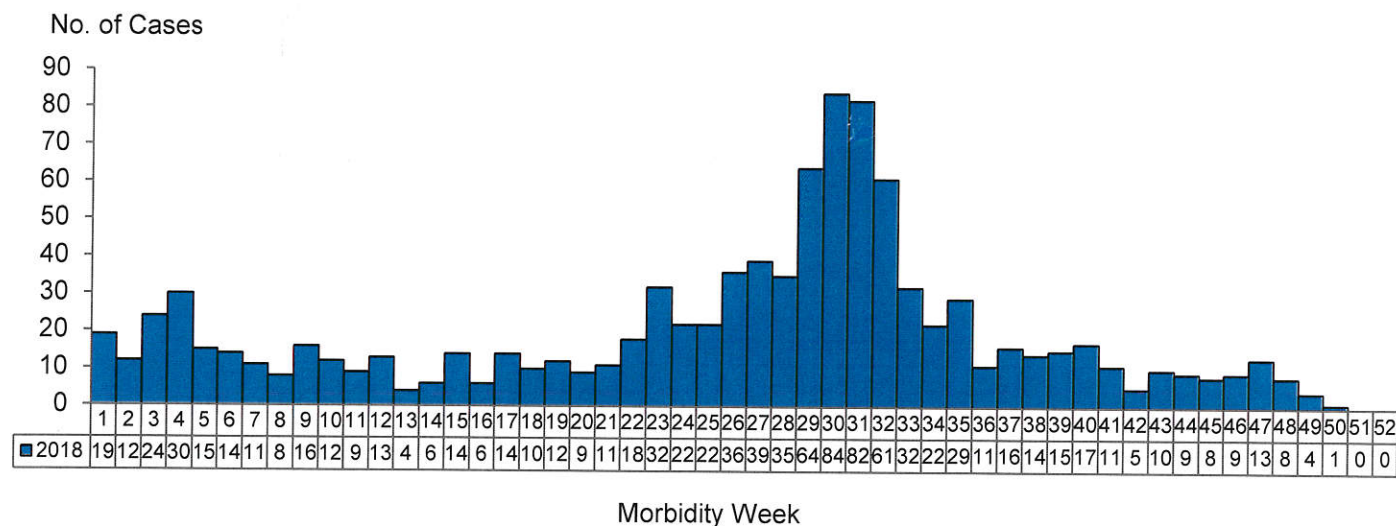| 2018	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
	19	12	24	30	15	14	11	8	16	12	9	13	4	6	14	6	14	10	12	9	11	18	32	22	22	36	39	35	64	84	82	61	32	22	29	11	16	14	15	17	11	5	10	9	8	9	13	8	4	1	0	0

Morbidity Week

Table 2 shows that majority of the confirmed Dengue cases were from the following regions: **Region III** (161, 16%), **NCR** (135, 13%), **Region XI** (129, 13%), and **Region I** (119, 12%).The predominant serotype from January 1 to December 31, 2018 is **DENV3** (598 cases, 60%) followed by **DENV 1** (223 cases, 22%), **DENV 2** (149 cases,15%), **DENV4** (25 cases, 3%) and mixed serotype (3 cases, 0.3%).

Table 2. Confirmed Dengue Cases by Region and Serotype (n=998)
Philippines, January 1 – December 31, 2018

Region	Serotype					Total
	Dengue 1	Dengue 2	Dengue 3	Dengue 4	Mixed Serotype	
PHILIPPINES	223	149	598	25	3	998
I	8	14	95	2	0	119
II	2	3	25	0	0	30
III	28	31	97	5	0	161
IV-A	10	8	49	2	1	70
MIMAROPA	6	3	2	0	0	11
V	4	0	23	0	0	27
VI	3	0	24	0	0	27
VII	2	13	20	3	0	38
VIII	1	9	28	0	0	38
IX	71	3	5	0	0	79
X	12	3	22	0	1	38
XI	37	23	63	6	0	129
XII	3	0	5	0	0	8
ARMM	8	7	16	0	0	31
CAR	7	2	29	2	0	40
CARAGA	6	9	4	0	0	19
NCR	15	21	91	5	1	133

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Age of confirmed Dengue cases ranged from less than 1 year old to 84 years old (median year of 12 years). Majority of the confirmed cases (537, 54%) were male. 339 (34%) of the confirmed cases belonged to the 10-14 years age group (Figure 4).

Figure 4. Confirmed Dengue Cases by Age Group and Sex (n=998)
Philippines, January 1 – December 31, 2018
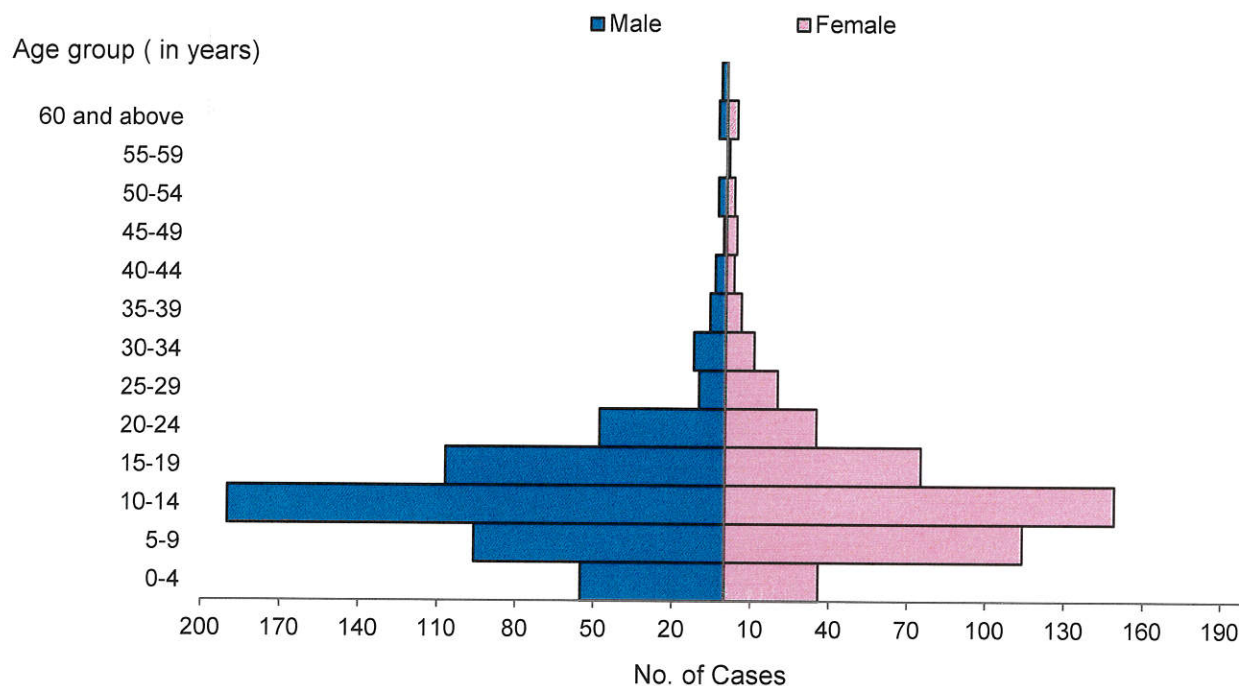
C.   Profile of Reported Dengue Deaths

There were 1,083 deaths (CFR = 0.50%) reported from January 1 to December 31, 2018. The case fatality rate is lower compared to the same period last year, 811 deaths (CFR=0.53%). The provinces or city with the highest number of deaths were: **Quezon City** (64 deaths, 6%), **Rizal** (62 deaths, 6%), **Negros Occidental** (60 deaths, 6%), **Cebu** (60 deaths,6%), and **Bohol** (53 deaths, 5%).

Table 3. Top Provinces with Highest Reported Dengue Deaths (n=1,083)
Philippines January 1 – December 31, 2018

Province	Deaths	% among Deaths
Quezon City	64	6
Rizal	62	6
Negros Occidental	60	6
Cebu	60	6
Bohol	53	5

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Age of deaths ranged from less than 1 year old to 93 years old (median age of 8 years). Majority (595, 55%) of the cases were female. Most of the reported Dengue deaths belonged to 5-9 years age group (424, 39%) (Figure 5).

Figure 5. Reported Dengue Deaths by Age Group and Sex (n=1,083)
Philippines, January 1 – December 31, 2018