



Morbidity Week 23 – June 7 – June 13, 2015

Epidemiology Bureau  
Public Health Surveillance Division

### Introduction

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 the viral disease to humans.

In the Philippines, Aedes aegypti and Aedes albopictus are the primary and secondary mosquito vectors, respectively. The mosquito vectors breed in the small amount of water collected in such as storages such as tanks, cisterns, flower vases, plant axils and backyard litter.

The incubation period is from 3 to 14 days, commonly 4-7 days.

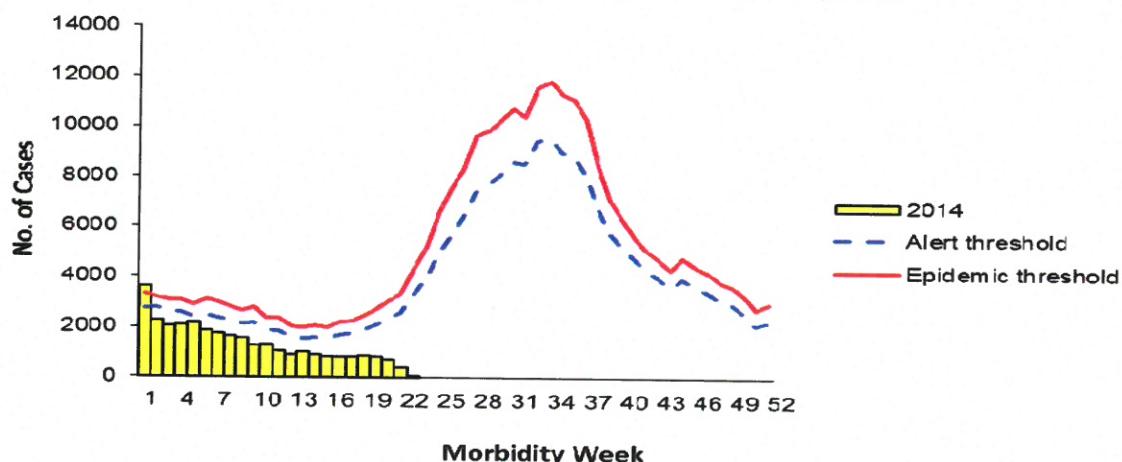
### Signs and Symptoms

- Sudden onset of high fever which may last from 2 to 7 days.
- Joint and muscle pain and pain behind the eyes.
- Weakness
- Skin rashes
- Nosebleeding when fever starts to subside
- Abdominal pain
- Vomiting of coffee-colored matter
- Dark-colored stools
- Difficulty breathing.

### Trend in the Philippines

A total of **30,879** suspect dengue cases was reported nationwide from January 1 to June 13, 2015. This is **4.19%** higher compared to the same time period last year (**29,636**).

**Fig. 1 Distribution of Suspect Dengue Cases by Morbidity Week Philippines, as of June 13, 2015**



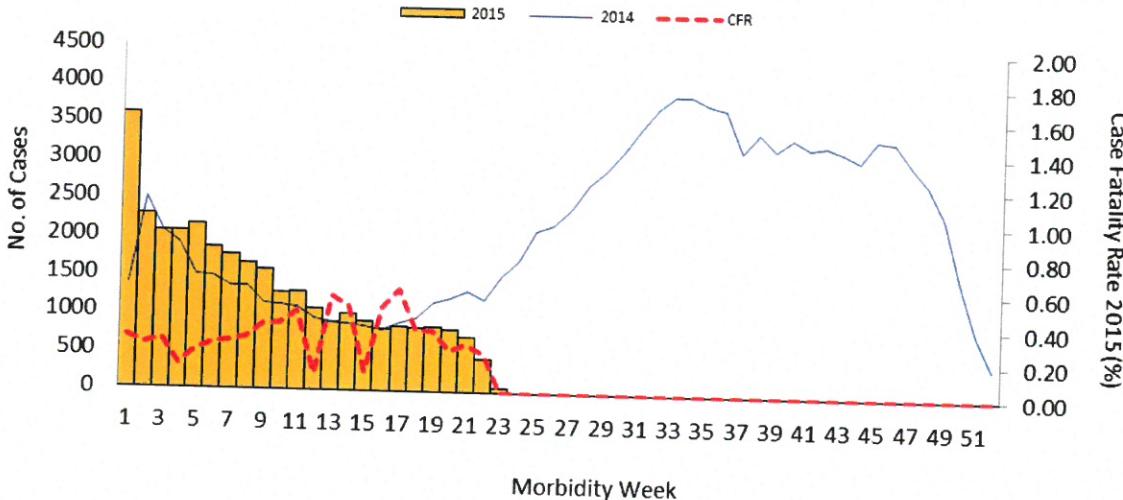
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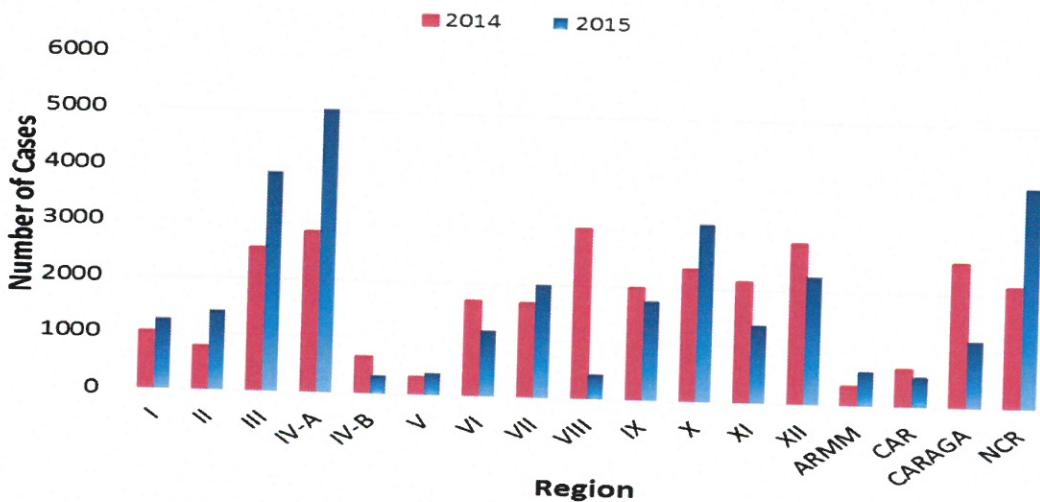
**Fig. 2 Suspect Dengue Cases by Morbidity Week,  
Philippines, as of June 13, 2015  
2015\* vs 2014 (N=30,879)**



### Geographic Distribution

Most of the cases were from the following regions: **Region IV-A** (16.3%), **NCR** (12.8%), **Region III** (12.7%), **Region X** (10.2%) and **Region XII** (7.4%).

**Fig. 3 Suspect Dengue Cases by Region  
Philippines, 2015 vs 2014**



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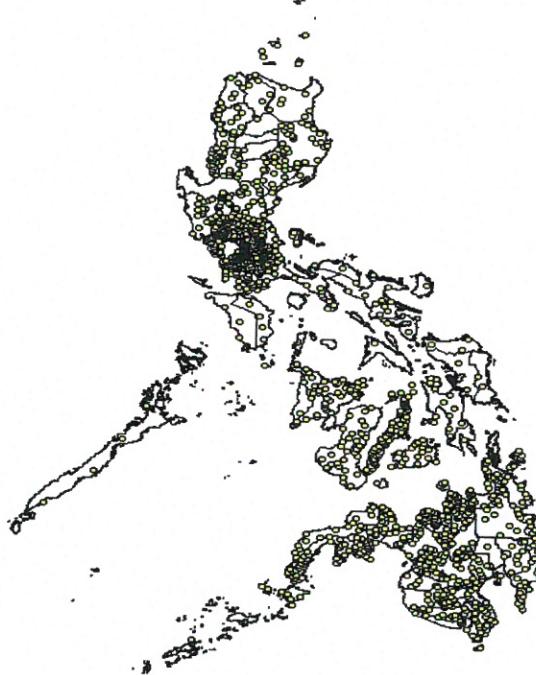
## Dengue Cases

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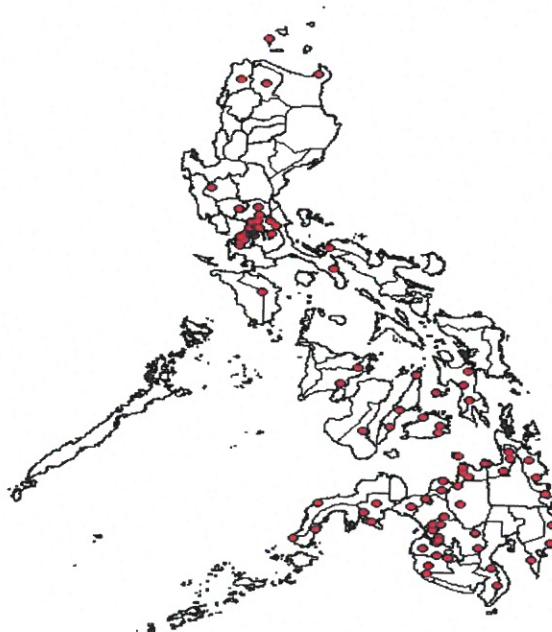
**Fig. 4 Suspect Dengue Cases as of January 1 to June 13, 2015**

Region	Cases
Region 1	= 1253
Region 2	= 1423
Region 3	= 3918
Region 4A	= 5042
Region 4B	= 320
Region 5	= 388
Region 6	= 1186
Region 7	= 2020
Region 8	= 441
Region 9	= 1779
Region 10	= 3159
Region 11	= 1389
Region 12	= 2277
ARMM	= 609
CAR	= 543
CARAGA	= 1194
NCR	= 3938
Total	= 30879



**Fig. 5 Suspect Dengue Deaths as of January 1 to June 13, 2015**

Region	Deaths
Region 1	= 4
Region 2	= 2
Region 3	= 4
Region 4A	= 11
Region 4B	= 1
Region 5	= 0
Region 6	= 2
Region 7	= 8
Region 8	= 3
Region 9	= 6
Region 10	= 11
Region 11	= 4
Region 12	= 10
ARMM	= 6
CAR	= 1
CARAGA	= 7
NCR	= 15
Total	= 95



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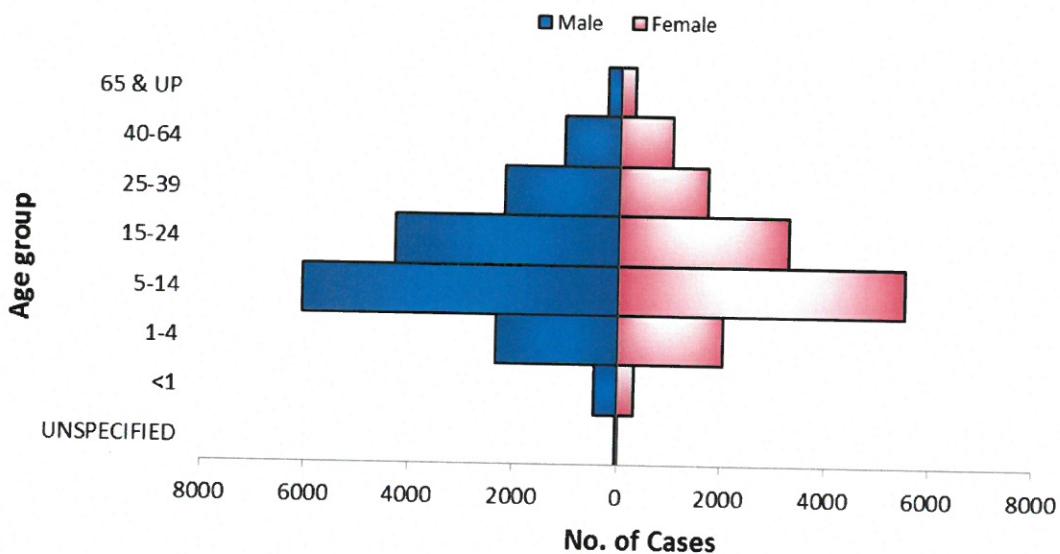
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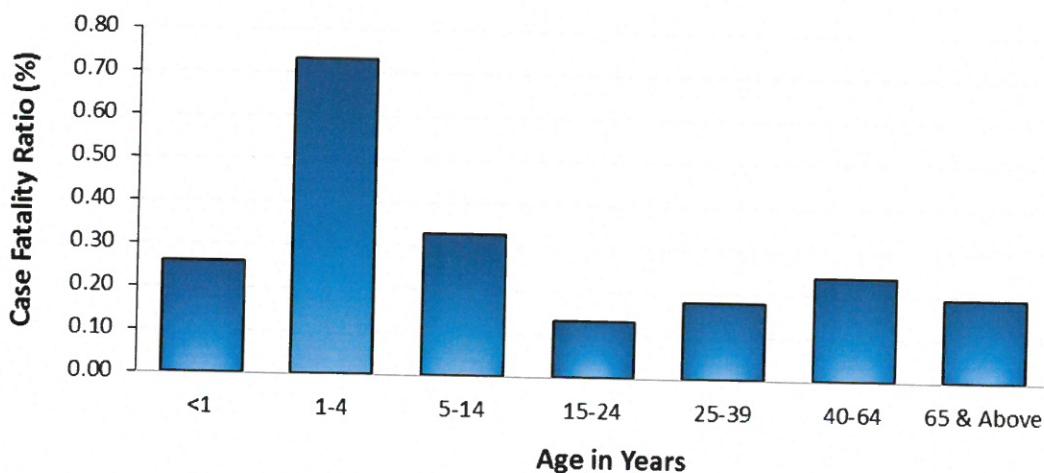
### Profile of Cases

Ages of cases ranged from less than 1 month to 97 years old (median = 13 years). Majority of cases were male (54.1%). Most (37.6%) of the cases belonged to the 5 to 14 years age group (Fig. 6). There were 95 deaths (CFR = 0.31%).

**Fig.6 Suspect Dengue Cases by Agegroup and Sex Philippines, as of June 13, 2015 (N=30,879)**



**Fig. 7 Suspect Dengue Case Fatality Rate (CFR) by Age Group, Philippines, as of June 13, 2015**



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### Dengue Virus Serotype Distribution in the Philippines

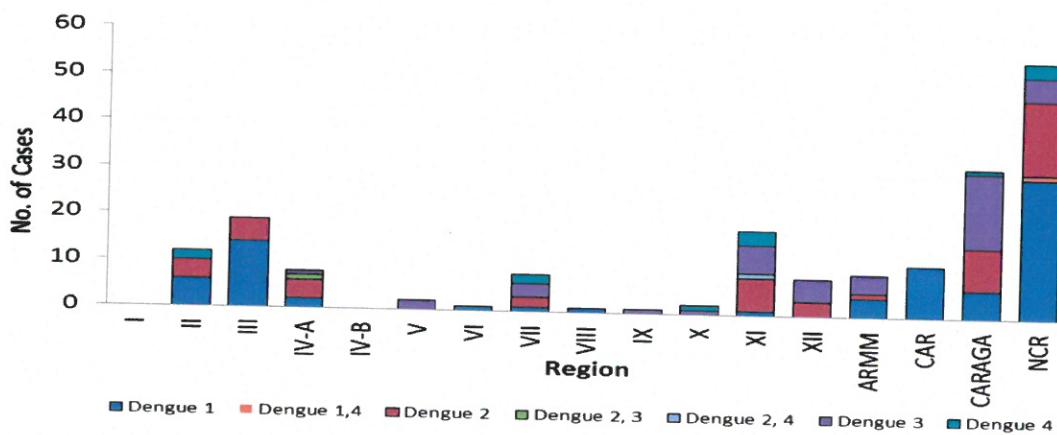
Dengue Fever/Dengue Hemorrhagic Fever has emerged as a major public health problem in the past 20 years, with an increasing incidence and expanding geographical distribution in both the vector and the disease (Gubler, 2002). Increased human migration and travel, climate change, urbanization and social changes have all contributed to this resurgence. These factors will continue to increase in the future, thus, an effective prevention and control program needs to be in place in order to predict and prevent epidemics.

Dengue is considered a Category II notifiable disease in the syndromic based Philippine Integrated Disease Surveillance and Response (PIDS) of the country lead by the Epidemiology Bureau. Dengue cases from health facilities nationwide are reported to the NEC on a weekly basis. However, laboratory confirmation of these cases has been limited. An active surveillance obtained from a smaller percentage of cases on a sentinel basis may provide a more detailed serotype-specific incidence data. Using the data from both systems, disease burden estimates could be determined.

The Research Institute for Tropical Medicine (RITM) served as the National Reference Laboratory for Dengue and other arboviruses together with NEC has started laboratory confirmation of Dengue cases in 2008, thus providing the serotype incidence over the years. With that, the Epidemiology Bureau – Philippine Integrated Disease Surveillance and Response (PIDS), in collaboration with the Research Institute for Tropical Medicine (RITM), has developed a guideline entitled, “**Interim Guidelines on the Sentinel-based Active Dengue Surveillance**” (DM 2014-0112).

Dengue serotype data are based on samples systematically collected from 20 sentinel site hospitals in all regions of the Philippines. Based from the Sentinel Based Active Dengue Surveillance, there were 187 laboratory confirmed dengue cases in the Philippines, in which all four DENV serotypes were present from January 1 to June 13, 2015. The predominant serotype during the first four months of 2015 is **DENV-1** (41.2%) followed by **DENV-2** (27.3%), mostly occurring in the NCR region (29.4%).

**Fig. 8 Confirmed Dengue Cases by Region and Serotype Philippines, as of June 13, 2015 (n=187)**



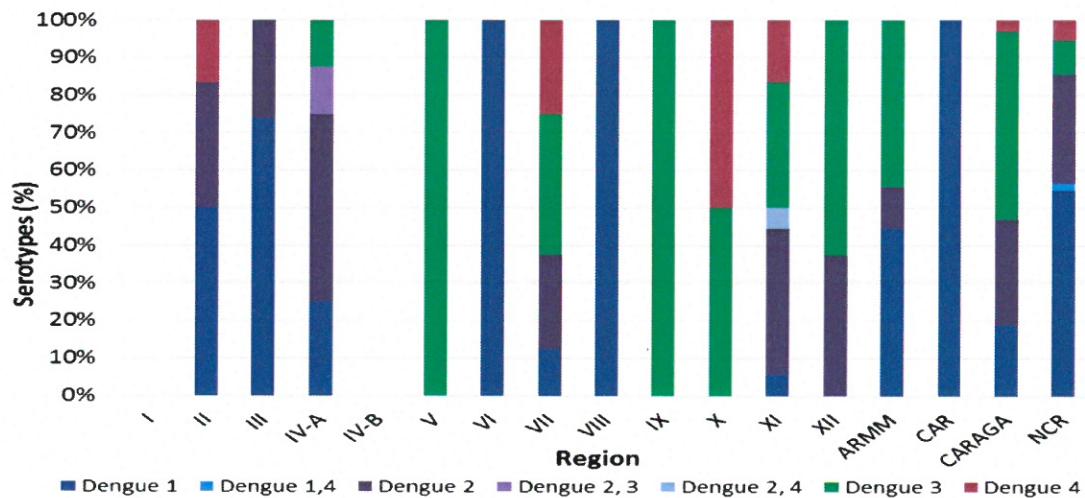
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**Fig. 9 Dengue virus serotype distribution in the Philippines, as of June 13, 2015 (n=187)**



**Table 1. Dengue Cases & Deaths by Region**

Philippines, 2015\* vs 2014

Region	Cases			Deaths			
	2015	2014	% Change	2015	CFR (%)	2014	CFR (%)
I	1253	1023	▲ 22.5	4	0.32	2	0.20
II	1423	779	▲ 82.7	2	0.14	5	0.64
III	3918	2542	▲ 54.1	4	0.10	4	0.16
IV-A	5042	2846	▲ 77.2	11	0.22	8	0.28
IV-B	320	653	▼ -51.0	1	0.31	4	0.61
V	388	312	▲ 24.4	0	0.00	2	0.64
VI	1186	1687	▼ -29.7	2	0.17	8	0.47
VII	2020	1678	▲ 20.4	8	0.40	7	0.42
VIII	441	3023	▼ -85.4	3	0.68	11	0.36
IX	1779	2000	▼ -11.1	6	0.34	10	0.50
X	3159	2354	▲ 34.2	11	0.35	12	0.51
XI	1389	2152	▼ -35.5	4	0.29	9	0.42
XII	2277	2857	▼ -20.3	10	0.44	24	0.84
ARMM	609	346	▲ 76.0	6	0.99	1	0.29
CAR	543	663	▼ -18.1	1	0.18	1	0.15
CARAGA	1194	2568	▼ -53.5	7	0.59	14	0.55
NCR	3938	2153	▲ 82.9	15	0.38	4	0.19
Total	30879	29636	▲ 4.19	95	0.31	126	0.43

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**Table 2. Weekly Dengue Summary Report by Region**  
Philippines, as of May 30, 2015

Region	Morbidity Week				23rd Morbidity Week		Cumulative Total	
	19	20	21	22	2015	2014	2015	2014
I	65	57	35	4	0	54	1253	1023
II	84	76	72	33	2	39	1423	779
III	80	76	73	50	8	42	3918	2542
IV-A	96	111	88	68	21	49	5042	2846
IV-B	4	5	4	4	2	32	320	653
V	12	8	17	12	3	10	388	312
VI	39	39	26	25	2	125	1186	1687
VII	42	25	19	3	0	77	2020	1678
VIII	3	3	7	2	3	125	441	3023
IX	67	57	48	5	0	158	1779	2000
X	87	82	98	86	8	205	3159	2354
XI	42	53	37	35	0	143	1389	2152
XII	87	99	98	54	4	162	2277	2857
ARMM	18	27	20	8	1	29	609	346
CAR	27	33	15	5	0	22	543	663
CARAGA	30	12	9	7	0	238	1194	2568
NCR	70	56	55	42	9	16	3938	2153
<b>Total</b>	<b>853</b>	<b>819</b>	<b>721</b>	<b>443</b>	<b>63</b>	<b>1526</b>	<b>30879</b>	<b>29636</b>

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## Treatment

- Do not give aspirin for fever.
- Give sufficient amount of water or rehydrate a dengue suspect.
- If fever or symptoms persist for 2 or more days, bring the patient to the nearest hospital.

## Prevention and Control

Follow the 4-S against Dengue:

- Search and Destroy
  - Cover water drums and pails.
  - Replace water in flower vases once a week.
  - Clean gutters of leaves and debris.
  - Collect and dispose all unsuable tin, cans, jars, bottles and other items that can collect and hold water.
- Self-protection Measurues
  - Wear long pants and long sleeved shirt.
  - Use mosquito repellent every day.
- Seek Early Consultant
  - Consult the doctors immediately if fever persist after 2 days and rashes appears.
- Say Yes to Fogging When There is an Impending Outbreak or a Hotspot.



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## Dengue Cases

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