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 October 27, 2018 or Morbidity Weeks 1 – 43.

PIDSR Case Definition for Dengue Diseases

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

<table>
<thead>
<tr>
<th>Case Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suspict</strong></td>
</tr>
<tr>
<td>A previously well person with acute febrile illness of 2-7 days duration with clinical signs and symptoms of dengue</td>
</tr>
<tr>
<td><strong>Probable</strong></td>
</tr>
<tr>
<td>A suspect case plus:</td>
</tr>
<tr>
<td>Laboratory test, at least CBC (leucopenia with or without thrombocytopenia) and/or Dengue NS1, antigen test or dengue IgM antibody test (optional)</td>
</tr>
<tr>
<td><strong>Confirmed</strong></td>
</tr>
<tr>
<td>- Viral culture isolation,</td>
</tr>
<tr>
<td>- Polymerase Chain Reaction</td>
</tr>
</tbody>
</table>

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A PDF file of this report is available at www.doh.gov.ph/statistics.
I. Trend in the Philippines

A total of 158,950 Dengue cases were reported nationwide from January 1 to October 27, 2018, 2018. This is 27% higher compared to the same period last year (125,236). 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 - October 27, 2018 (N=158,950)

II. Geographic Distribution

Table 1 shows that majority of the cases were from the following regions: Region III (16%), NCR (14%) Region IV-A (12%), Region I, Region VI (8%), and Region VII (7%).

The regions with the highest percent increase in the number of reported cases for this year compared to last year were: ARMM (386%), MiMAROPA (167%), CARAGA (92%), Region I (87%), Region II (68%), Region X (67%), Region VIII (62%), and CAR (57%).

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Table 1. Reported Dengue Cases by Region  
Philippines, January 1 – October 27, 2018 vs January 1 – October 27, 2017

<table>
<thead>
<tr>
<th>Region</th>
<th>Cases 2018</th>
<th>Deaths 2018</th>
<th>Cases 2017</th>
<th>Deaths 2017</th>
<th>% Change of Reported Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHILIPPINES</td>
<td>158,950</td>
<td>807</td>
<td>125,236</td>
<td>653</td>
<td>↑27</td>
</tr>
<tr>
<td>I</td>
<td>12,000 (8%)</td>
<td>40 (5%)</td>
<td>6,429 (5%)</td>
<td>17 (3%)</td>
<td>↑87</td>
</tr>
<tr>
<td>II</td>
<td>6,854 (4%)</td>
<td>25 (3%)</td>
<td>4,081 (3%)</td>
<td>28 (4%)</td>
<td>↑68</td>
</tr>
<tr>
<td>III</td>
<td>24,820 (16%)</td>
<td>65 (8%)</td>
<td>20,092 (16%)</td>
<td>63 (10%)</td>
<td>↑24</td>
</tr>
<tr>
<td>IV-A</td>
<td>18,759 (12%)</td>
<td>113 (14%)</td>
<td>16,674 (13%)</td>
<td>69 (11%)</td>
<td>↑13</td>
</tr>
<tr>
<td>MIMAROPA</td>
<td>6,260 (4%)</td>
<td>44 (5%)</td>
<td>2,341 (2%)</td>
<td>12 (2%)</td>
<td>↑167</td>
</tr>
<tr>
<td>V</td>
<td>2,483 (2%)</td>
<td>26 (3%)</td>
<td>2,510 (2%)</td>
<td>16 (2%)</td>
<td>↓1</td>
</tr>
<tr>
<td>VI</td>
<td>12,583 (8%)</td>
<td>79 (10%)</td>
<td>8,647 (7%)</td>
<td>69 (11%)</td>
<td>↑46</td>
</tr>
<tr>
<td>VII</td>
<td>11,417 (7%)</td>
<td>62 (8%)</td>
<td>11,881 (9%)</td>
<td>102 (16%)</td>
<td>↓4</td>
</tr>
<tr>
<td>VIII</td>
<td>5,939 (4%)</td>
<td>33 (4%)</td>
<td>3,658 (3%)</td>
<td>20 (3%)</td>
<td>↑62</td>
</tr>
<tr>
<td>IX</td>
<td>4,687 (3%)</td>
<td>44 (5%)</td>
<td>4,131 (3%)</td>
<td>24 (4%)</td>
<td>↑13</td>
</tr>
<tr>
<td>X</td>
<td>9,646 (6%)</td>
<td>56 (7%)</td>
<td>5,880 (5%)</td>
<td>23 (4%)</td>
<td>↑67</td>
</tr>
<tr>
<td>XI</td>
<td>4,164 (3%)</td>
<td>15 (2%)</td>
<td>3,155 (3%)</td>
<td>23 (4%)</td>
<td>↑32</td>
</tr>
<tr>
<td>XII</td>
<td>6,082 (4%)</td>
<td>27 (3%)</td>
<td>8,677 (6%)</td>
<td>35 (5%)</td>
<td>↓30</td>
</tr>
<tr>
<td>ARMM</td>
<td>1,944 (1%)</td>
<td>19 (2%)</td>
<td>415 (0.3%)</td>
<td>2 (0.3%)</td>
<td>↑368</td>
</tr>
<tr>
<td>CAR</td>
<td>5,056 (3%)</td>
<td>8 (1%)</td>
<td>3,224 (3%)</td>
<td>9 (1%)</td>
<td>↑57</td>
</tr>
<tr>
<td>CARAGA</td>
<td>4,519 (3%)</td>
<td>19 (2%)</td>
<td>2,380 (2%)</td>
<td>12 (2%)</td>
<td>↑92</td>
</tr>
<tr>
<td>NCR</td>
<td>21,537 (14%)</td>
<td>132 (18%)</td>
<td>21,091 (17%)</td>
<td>129 (20%)</td>
<td>↑2</td>
</tr>
</tbody>
</table>

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 (83,805, 53%) were male. Most of the cases belonged to the 10-14 years age group (34,195, 22%) (Figure 2).

Figure 2. Reported Dengue Cases by Age Group and Sex (N= 158,950)  
Philippines, January 1 – October 27, 2018

Age group (in years) | Male | Female
---|---|---
60 and above |  |  |
55-59 |  |  |
50-54 |  |  |
45-49 |  |  |
40-44 |  |  |
35-39 |  |  |
30-34 |  |  |
25-29 |  |  |
20-24 |  |  |
15-19 |  |  |
10-14 |  |  |
5-9 |  |  |
0-4 |  |  |

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B. Profile of Confirmed Dengue Cases

Out of 158,950 reported Dengue cases nationwide, 71,625 (45%) cases were tested. Out of the tested, 835 (1%) cases were confirmed via PCR.

Figure 3. Confirmed Dengue Cases by Morbidity Week (n=835)  
Philippines, January 1 – October 27, 2018

Table 2 shows that majority of the confirmed Dengue cases were from the following regions: NCR (129, 15%), Region III (109, 13%), Region I (98, 12%), Region XI (93, 11%), and Region IV-A (69, 8%). The predominant serotype from January 1 to October 27, 2018 is DENV3 (529 cases, 63%) followed by DENV1 (167 cases, 20%), DENV2 (117 cases, 14%), DENV4 (19 cases, 2%) and mixed serotype (3 cases, 0.4%).

Table 2. Confirmed Dengue Cases by Region and Serotype (n=835)  
Philippines, January 1 – October 27, 2018

<table>
<thead>
<tr>
<th>Region</th>
<th>Dengue 1</th>
<th>Dengue 2</th>
<th>Dengue 3</th>
<th>Dengue 4</th>
<th>Mixed Serotype</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHILIPPINES</td>
<td>167</td>
<td>117</td>
<td>529</td>
<td>19</td>
<td>3</td>
<td>835</td>
</tr>
<tr>
<td>I</td>
<td>7</td>
<td>1</td>
<td>48</td>
<td>2</td>
<td>0</td>
<td>98</td>
</tr>
<tr>
<td>II</td>
<td>1</td>
<td>2</td>
<td>77</td>
<td>2</td>
<td>0</td>
<td>109</td>
</tr>
<tr>
<td>III</td>
<td>18</td>
<td>12</td>
<td>48</td>
<td>0</td>
<td>0</td>
<td>69</td>
</tr>
<tr>
<td>IV-A</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>MIMAROPA</td>
<td>4</td>
<td>0</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>V</td>
<td>3</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>VI</td>
<td>1</td>
<td>11</td>
<td>16</td>
<td>3</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>VII</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>39</td>
</tr>
<tr>
<td>VIII</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>59</td>
</tr>
<tr>
<td>IX</td>
<td>51</td>
<td>3</td>
<td>126</td>
<td>0</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>X</td>
<td>7</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>XI</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>XII</td>
<td>15</td>
<td>22</td>
<td>87</td>
<td>4</td>
<td>1</td>
<td>129</td>
</tr>
</tbody>
</table>

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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 (439, 53%) were male. 268 (32%) 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=835)
Philippines, January 1 – October 27, 2018

C. Profile of Reported Dengue Deaths

There were 807 deaths (CFR = 0.51%) reported from January 1 to October 27, 2018. This is lower compared to the same period last year, 653 deaths (CFR=0.52%). The provinces with the highest number of deaths were: Rizal (57 deaths, 7%), Negros Occidental (51 deaths, 6%), Quezon City (46 deaths, 6%), Cebu (34 deaths, 4%), and Zamboanga Del Sur (31 deaths, 4%).

Table 3. Top Provinces with Highest Reported Dengue Deaths (n=807)
Philippines January 1 – October 27, 2018

<table>
<thead>
<tr>
<th>Province</th>
<th>Deaths</th>
<th>% among Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rizal</td>
<td>57</td>
<td>7</td>
</tr>
<tr>
<td>Negros Occidental</td>
<td>51</td>
<td>6</td>
</tr>
<tr>
<td>Quezon City</td>
<td>46</td>
<td>6</td>
</tr>
<tr>
<td>Cebu</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td>Zamboanga Del Sur</td>
<td>31</td>
<td>4</td>
</tr>
</tbody>
</table>

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Age of deaths ranged from less than 1 year old to 93 years old (median age of 8 years). Majority (425, 53%) of the cases were female. Most of the reported Dengue deaths belonged to 5-9 years age group (309, 38%) (Figure 5).

**Figure 5. Reported Dengue Deaths by Age Group and Sex (n=807)**  
Philippines, January 1 – October 27, 2018

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