Trend in the Philippines

A total of 409 suspect malaria cases were reported nationwide from January 1 to March 4, 2017. This is 41% lower compared to the same period last year (Fig. 1).

As of 2016, there were 32 provinces declared as Malaria free, 41 provinces on Elimination status while the remaining 9 provinces were still malaria endemic (Fig. 2).

Geographic Location

Most of the cases (Fig. 3) were from the following regions: Region IV-B (82%), Region 11 (9%), Region 12 (3%), and ARMM (2%) while the remaining 4% came from the rest of the regions in the country. Palawan (Table 2) accounted 82% of the reported cases followed by Davao del Norte (8%) and Sultan Kudarat (4%).

Table 1. Quick Facts

<table>
<thead>
<tr>
<th>Demographic Data</th>
<th>Week 1 to 9 (2017)</th>
<th>Week 1 to 9 (2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Reported Case</td>
<td>409</td>
<td>693</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53%</td>
<td>55%</td>
</tr>
<tr>
<td>Female</td>
<td>47%</td>
<td>45%</td>
</tr>
<tr>
<td>Age Range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>less than 1 y/o</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>1 to 4 y/o</td>
<td>93</td>
<td>186</td>
</tr>
<tr>
<td>5 to 9 y/o</td>
<td>91</td>
<td>140</td>
</tr>
<tr>
<td>10 to 14 y/o</td>
<td>69</td>
<td>110</td>
</tr>
<tr>
<td>15 to 19 y/o</td>
<td>28</td>
<td>63</td>
</tr>
<tr>
<td>20 to 24 y/o</td>
<td>19</td>
<td>39</td>
</tr>
<tr>
<td>25 to 29 y/o</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>30 to 34 y/o</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>35 to 39 y/o</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>40 to 44 y/o</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>45 to 49 y/o</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>50 to 54 y/o</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>55 to 59 y/o</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>above 60 y/o</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History of Travel to Endemic Area</th>
<th>Yes</th>
<th>10%</th>
<th>8%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>90%</td>
<td>92%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Alive</th>
<th>100%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Died</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Fig. 1 Reported Malaria Cases by Morbidity Week, Philippines, Jan 1 – Mar 4, 2017
2017 v.s 2016 (N=409)

NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.

Data Source: 2016 & 2017 Cases-Philippine Integrated Disease Surveillance and Response & Phil. Malaria Information System Database
Palawan reported 41% decreased in cases than last year (570). Large proportion (42%) of reported cases were from the municipality of Rizal, followed by Bataraza (21%), Brooke’s Point (13%), and Balabac (11%) while the remaining 13% came from the other municipalities in Palawan. In terms of change rate, the municipality of Roxas (200%) and Narra (100%) had more cases than the same period last year while the city of Puerto Princesa, municipalities of Balabac, Bataraza, Brooke’s Point, Sopronio Española, Rizal, Quezon, San Vicente, Aborlan and Tatay had lower reported cases (Fig 4).

*NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.

Data Source: 2016 & 2017 Cases-Philippine Integrated Disease Surveillance and Response & Phil. Malaria Information System Database
Profile of Cases

Ages of cases ranged from 0 to 81 years old with median of 10 y/o. Majority of cases were male (54%), most (23%) of the cases belonged to the 1-4 year old age-group (Fig. 5).

Majority (75%) of the reported cases were indigenous people (IP), (Fig. 6) with the IP group of Palawan having the largest (67%) proportion of cases followed by Molbog (12%) and Manobo (3%). The tendency of IPs to live in mountainous areas in connection to their livelihood put them at higher risk not only of malaria exposure but as well as limited access to health care.

Malaria Parasite Distribution

Majority (71%) of parasite detected were P. Falciparum followed by P. Vivax (23%) and P. Malariae (2%) with only a small proportion of mixed parasites (2%) were seen while the rest (2%) were either negative or unspecified.

The distribution of parasites varied in Palawan and non-Palawan provinces. The predominant Parasite in Palawan is P. Falciparum (80%) while P. Vivax (49%) in non-Palawan provinces (Figure 7). The predominance of P. Vivax especially in province in elimination phase may be attributed to several factors such as difficulty of recognizing the disease due its dormant asymptomatic phase and tendency to cause relapse.

Malaria Screening Test

Majority (65.5%) of malaria screening test was performed thru the use of Rapid Diagnostic Test (RDT) while a smaller proportion (28%) thru microscopy (Fig. 8). Although microscopy remains a gold standard in diagnosing malaria, the use of RDT was beneficial as an initial test especially among provinces where trained malaria microscopists were no longer available.
Case Classification

Majority (97.6%) of cases were Confirmed Uncomplicated, a small proportion were Confirmed Severe (1.2%) while the rest were classified as probable and suspect case (Table 3).

Elimination Status

Out of the 409 reported malaria cases, majority (96%) were from provinces on Control Phase such as Palawan, Davao Del Norte and Sultan Kudarat. While 4% of cases were from provinces in Elimination Phase and provinces declared as Malaria Free. Although 17 cases (Table 4) were reported from these provinces, 16 had history of travel to malaria endemic areas while a single case with no history of travel had negative malaria test.

Large proportion (45%) of cases with history of travel visited endemic areas in the country such as Palawan while 38% reported history of travel to countries/territories with Malaria transmission such as Africa, Brazil, Papua New Guinea, Sabah Malaysia and Solomon Island (Fig. 9).

Table 3. Reported Malaria Cases by Case Classification, Jan 1- Mar 4, 2017, Philippines (N=409)

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number of Cases</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>Confirmed Uncomplicated</td>
<td>399</td>
<td>97.6%</td>
</tr>
<tr>
<td>Confirmed Severe</td>
<td>5</td>
<td>1.2%</td>
</tr>
<tr>
<td>Probable Uncomplicated</td>
<td>4</td>
<td>1.0%</td>
</tr>
<tr>
<td>Suspect</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total</td>
<td>409</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 4. Reported Cases by Malaria Provincial Classification & History of Travel, Jan 1 Mar 4, 2017, Philippines (N=409)

<table>
<thead>
<tr>
<th>Provincial Classification</th>
<th>Cases</th>
<th>History of Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlled</td>
<td>391</td>
<td>23</td>
</tr>
<tr>
<td>Provinces for Elimination</td>
<td>10</td>
<td>9*</td>
</tr>
<tr>
<td>Malaria Free Provinces</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>409</td>
<td>51</td>
</tr>
</tbody>
</table>

*NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.
Data Source: 2016 & 2017 Cases-Philippine Integrated Disease Surveillance and Response & Phil. Malaria Information System Database
Figure 9. Reported Malaria Cases by History of Travel to Malaria Endemic Countries/ Territories, Jan 1 to Mar 4, 2017