CLASSIFICATION OF ACUTE FLACCID PARALYSIS (AFP) CASES

AFP surveillance is an essential strategy which aims to look for poliovirus circulation in the community by investigating all possible polio cases. Its role is to identify high risk areas or groups and certify that the Philippines is still polio-free.

A total of 193 AFP cases were reported nationwide from January 1 to July 1, 2017 (Figure 1). Of these, 142 (74%) were discarded as non-polio AFP, 13 (7%) did not fit the standard case definition and were classified as Not AFP, 37 (19%) are still pending for classification and 1 (1%) was classified as vaccine associated paralytic polio (VAPP) (Table 2).

About 122 (63%) of the reported AFP cases have adequate stool specimen, while the rest are either with complete stool but with more than 14 days of specimen collection (34, 18%), 25 (13%) had no stool specimen collected and a portion (12, 6%) had only 1 stool specimen collected.

FIGURE 1. CLASSIFICATION ACUTE FLACCID PARALYSIS CASES, PHILIPPINES, JANUARY 1 – JULY 1, 2017 (N=193)

| TABLE 1. AFP CASES BY REGION AND CLASSIFICATION |
| PHILIPPINES, JANUARY 1 – JULY 1, 2017 (N=193) |

<table>
<thead>
<tr>
<th>REGION</th>
<th>2017 Target AFP Cases 2/100k</th>
<th>2017 Target AFP Cases 1/100k</th>
<th>Reported Cases as of MW 26</th>
<th>Classification</th>
<th>Total Number of Classified Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region I</td>
<td>40</td>
<td>15</td>
<td>20</td>
<td>10</td>
<td>22</td>
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<tr>
<td>Region II</td>
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<td>14</td>
<td>10</td>
<td>8</td>
<td>1</td>
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<tr>
<td>Region III</td>
<td>87</td>
<td>43</td>
<td>11</td>
<td>1</td>
<td>3</td>
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<td>111</td>
<td>56</td>
<td>20</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Region IVB</td>
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<td>12</td>
<td>3</td>
<td>2</td>
<td>0</td>
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<td>11</td>
<td>8</td>
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<tr>
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<td>6</td>
<td>0</td>
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<tr>
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<td>18</td>
<td>6</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
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<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Region X</td>
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<td>18</td>
<td>10</td>
<td>0</td>
<td>2</td>
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<tr>
<td>Region XI</td>
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<td>21</td>
<td>18</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Region XII</td>
<td>36</td>
<td>18</td>
<td>13</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ARM</td>
<td>30</td>
<td>15</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>CAR</td>
<td>14</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CARAGA</td>
<td>21</td>
<td>11</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>NCR</td>
<td>98</td>
<td>49</td>
<td>13</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>NPI</td>
<td>36</td>
<td>18</td>
<td>7</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>PHIL</td>
<td>800</td>
<td>400</td>
<td>193</td>
<td>142</td>
<td>1</td>
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</tbody>
</table>

Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.
TABLE 2. STOOL SPECIMEN RESULT AMONG REPORTED AFP CASES, PHILIPPINES, JAN. 1 – JUL. 1, 2017, (N= 193)

<table>
<thead>
<tr>
<th>Stool Specimen Result</th>
<th>Stool Specimen 1</th>
<th>Stool Specimen 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive for poliovirus</td>
<td>0 0%</td>
<td>0 0%</td>
</tr>
<tr>
<td>Negative for poliovirus</td>
<td>138 72%</td>
<td>132 68%</td>
</tr>
<tr>
<td>Sabin-like poliovirus</td>
<td>2 1%</td>
<td>2 1%</td>
</tr>
<tr>
<td>Non-polio enterovirus</td>
<td>12 6%</td>
<td>9 5%</td>
</tr>
<tr>
<td>Not Tested</td>
<td>26 13%</td>
<td>38 20%</td>
</tr>
<tr>
<td>Pending Lab Results</td>
<td>15 8%</td>
<td>12 6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>193 100%</td>
<td>193 100%</td>
</tr>
</tbody>
</table>

VIRUS ISOLATION AND GENOTYPING

Table 2 shows the AFP stool specimen test results from the National Polio Laboratory (NPL) of the Research Institute of Tropical Medicine (RITM). There were 0 isolated poliovirus from January 1 to July 1, 2017. Among the 193 cases, 138 (72%) from the 1st stool specimen and 132 (68%) from the 2nd stool specimen tested negative for poliovirus. Two (2) cases had viral isolation of Sabin-like poliovirus type 1 and 3 from both stool 1 and stool 2 specimen. These cases were reported from Regions IV-A and XI respectively.

PROFILE OF CASES

Among the reported AFP cases, 113 (59%) are Males and 80 (41%) are Females. Most of the AFP cases reported belong to the 10-14 age group (69, 36%) (Figure 2).

Information on the immunization status of reported cases are essential for the EPI coordinators in choosing appropriate strategies in targeting specific age groups for immunization. Between ages 0-14 yrs old, only 116 (63%) had completed their OPV dose; the rest of the cases had 0 OPV dose, incomplete OPV dose received or unknown. (Figure 3).

FIGURE 2. AFP REPORTED CASES BY SEX AND AGE GROUP, PHILIPPINES, JAN. 1 – JUL. 1, 2017 (N=193)

FIGURE 3. IMMUNIZATION STATUS AMONG AFP CASES BY POLIO VACCINATION DOSE AND AGE GROUP, PHILIPPINES, JAN. 1 – JUL. 1, 2017 (n=185)

FIGURE 4. TOP 10 DIAGNOSIS OF NON-POLIO AFP CASES, PHILIPPINES, JAN. 1 – JUL. 1, 2017, (n=141).

The differential diagnosis of AFP includes but is not limited to, poliomyelitis, Guillain Barre Syndrome (GBS), traumatic neuritis and transverse myelitis. These four are the common diseases that represent the most common causes of AFP; however, there are other differential diagnosis that have numerous etiologies. Hence, any diseases that represents AFP, even if diagnosed as disease other then polio by the physician should be reported and collected with stool specimen. Figure 4 shows that GBS is the most common disease among the non-polio AFP cases reported.
SURVEILLANCE PERFORMANCE INDICATORS - AFP REPORTING RATE AND NON-POLIO AFP RATE

From January 1 to July 1, 2017, there were 193 AFP cases reported, providing the Philippines a reporting rate of 0.97 per 100,000 population of children below 15 years old. Only Region I reached the 2/100 K target while 7 Regions were able to reach the minimum target. One hundred forty-two (142) have been discarded as non-polio; which gives us a non-polio AFP rate of 0.71/100,000. At present, only Region I was able to reach the target of 2/100,000 and only 5 Regions were able to reach the minimum target. (Figure 5 and Table 3)

FIGURE 5. NON-POLIO AFP RATE BY REGION AND YEAR, PHILIPPINES, JAN. 1 – JUL. 1, 2017 (n=142)

SURVEILLANCE PERFORMANCE INDICATORS – STOOL SPECIMEN ADEQUACY RATE

All AFP cases should have full clinical and virological investigation with at least 80% of AFP cases having adequate stool specimens collected. Among 180 AFP cases, 147 (63%) were adequately collected with stool specimen 1 and 2, while the rest had either specimens collected for more than 14 days (33, 18%) or had no stool or 1 stool specimen only (Figure 6). As of MW 26, the adequate stool specimen rate is 63% with only 2 Regions (V and IX) reaching the target (Table 4)

FIGURE 6. STOOL SPECIMEN ADEQUACY RATE BY REGION, PHILIPPINES, JAN. 1 - JUL. 1, 2017 (n=180)

<table>
<thead>
<tr>
<th>Region</th>
<th>Reporting Rate</th>
<th>Non-Polio AFP Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region I</td>
<td>2.40</td>
<td>2.20</td>
</tr>
<tr>
<td>Region II</td>
<td>1.46</td>
<td>1.17</td>
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<tr>
<td>Region III</td>
<td>0.51</td>
<td>0.37</td>
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<tr>
<td>Region IV</td>
<td>0.72</td>
<td>0.50</td>
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<tr>
<td>Region IVB</td>
<td>0.49</td>
<td>0.33</td>
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<tr>
<td>Region V</td>
<td>1.34</td>
<td>1.01</td>
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<tr>
<td>Region VI</td>
<td>1.24</td>
<td>0.90</td>
</tr>
<tr>
<td>Region VII</td>
<td>0.51</td>
<td>0.51</td>
</tr>
<tr>
<td>Region VIII</td>
<td>0.67</td>
<td>0.34</td>
</tr>
<tr>
<td>Region IX</td>
<td>0.95</td>
<td>0.27</td>
</tr>
<tr>
<td>Region X</td>
<td>1.73</td>
<td>1.08</td>
</tr>
<tr>
<td>Region XI</td>
<td>1.73</td>
<td>0.86</td>
</tr>
<tr>
<td>Region XII</td>
<td>1.43</td>
<td>1.43</td>
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<tr>
<td>ARM</td>
<td>0.54</td>
<td>0.41</td>
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<tr>
<td>CAR</td>
<td>1.42</td>
<td>1.42</td>
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<tr>
<td>CARAGA</td>
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<td>0.56</td>
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<tr>
<td>NCR</td>
<td>0.53</td>
<td>0.33</td>
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<tr>
<td>NIR</td>
<td>0.78</td>
<td>0.67</td>
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<tr>
<td>PHIL</td>
<td>0.97</td>
<td>0.71</td>
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<table>
<thead>
<tr>
<th>Region</th>
<th>Stool Specimen Adequacy Rate</th>
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<tbody>
<tr>
<td>I</td>
<td>72%</td>
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<td>II</td>
<td>78%</td>
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<td>III</td>
<td>27%</td>
</tr>
<tr>
<td>IVA</td>
<td>47%</td>
</tr>
<tr>
<td>IVB</td>
<td>67%</td>
</tr>
<tr>
<td>V</td>
<td>81%</td>
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<td>VI</td>
<td>64%</td>
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<td>CRG</td>
<td>67%</td>
</tr>
<tr>
<td>NCR</td>
<td>62%</td>
</tr>
<tr>
<td>NIR</td>
<td>71%</td>
</tr>
<tr>
<td>PHIL</td>
<td>63%</td>
</tr>
</tbody>
</table>

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Definition of Terms

Acute flaccid paralysis (AFP) case
- Refers to any child less than 15 years of age with acute onset of floppy paralysis, or a person of any age in whom poliomyelitis is suspected by a physician.

Cluster of AFP cases
- Refers to the occurrence of two or more AFP cases in one province or city with the date of paralysis onset of within 1 month of each other.

Circulating Vaccine-derived poliovirus (cVDPV)
- Refers to a sub-classification of VDPV found in areas with gaps in OPV coverage; considered in the context of person-to-person transmission when non-identical but related VDPVs are identified in at least 2 AFP cases.

Confirmed polio
- Refers to an AFP case that was laboratory-confirmed with wild poliovirus.

Discarded as non-polio
- Refers to AFP cases classified by the expert panel committee as non-polio in which the paralysis is not caused by poliovirus.

Hot case
- Refers to an AFP case that is less than 5 years old, with less than 3 doses of OPV and has fever at the onset of asymmetrical paralysis; OR an AFP case or a person of any age whose stool specimen/s has poliovirus isolate.

Non-polio Enterovirus
- Refers to enterovirus (i.e. echovirus, coxsackie virus) other than poliovirus isolated from specimens.

Oral poliovirus vaccine (OPV)
- Refers to an attenuated vaccine administered orally that protects against either one (mOPV), two (tOPV) or three (cOPV) serotypes of poliovirus present in the formulation.

Polio compatible
- Refers to an AFP case which does not have an adequate stool collected, died or was lost to follow-up.

Sabin-like
- Refers to an AFP case with isolates consistent with a limited period of virus excretion or person-to-person transmission demonstrating less than 1% difference from parent OPV strains for poliovirus types 1 and 3, and less than 0.6% difference from the type 2 OPV strain by full Viral Protein 1 sequence homology.

Vaccine-derived poliovirus (VDPV)
- Refers to live, attenuated strains of the vaccine poliovirus that have undergone mutation and recombination and differ from (original) Sabin strains by 1 to 15% of VP1 nucleotides, the extent of genetic change which is indicative of prolonged replication.

Vaccine-associated paralytic poliomyelitis (VAPP)
- Refers to the only rare adverse event associated with OPV use which may occur in vaccine recipients or their contacts. The onset of symptoms with VAPP usually occurs 4-30 days following receipt of OPV or within 4-75 days after contact with a recipient of OPV. In immune-deficient individuals, VAPP may occur outside these windows.

Wild poliovirus (WPV)
- Refers to the wild poliovirus that is targeted for global eradication consisting of three types: poliovirus type 1, 2 and 3.