Dengue 3 Outbreak, Palau, December 2018 – December 2019

Epi Week 51: December 16 – 22, 2019

Outbreak Overview

On Friday, December 7, 2018, the Palau Ministry of Health alerted the public of an outbreak of dengue fever following the first ever laboratory confirmation of two cases with dengue serotype-3. A year after the declaration, the Ministry of Health continues to urge the public to practice prevention to control the spread of DENV-3.

Over 700 cases of dengue have been recorded between December 3, 2018 and December 17, 2019, including 266 serotyped cases of DENV-3. No cases of other serotypes have been identified since the start of the current outbreak.

During the past week (December 16 – December 22, 2019) there were 9 new cases reported. This brings the total number of cases for the month of December 2019 to 37 and from December 1, 2018 – December 22, 2019 to 746 cases.

There have been two deaths officially attributed to dengue infection during this outbreak.

Demographics

The majority of cases during this outbreak have been Palauan.

Ethnicity
- Palauan: 630 (84%)
- Bangladeshi: 41 (5%)
- Filipino: 23 (3%)
- Chinese: 21 (3%)
- Other: 31 (4%)

TOTAL: 746

Symptom Profile of Cases

Week 51 saw a total of nine (9) reported cases of dengue, including eight (8) Koror residents (Ngerkesoaol (5), Ngermid (1), Ngerchehal (1), and Ngerchehal (1) and (1) resident of Arui state.

The Ministry of Health Dengue Response Team continues to promote efforts to increase community involvement in mosquito source reduction activities through partnerships with state governments and the greater community. Prevention activities aim to promote the dengue prevention message in schools and the general community in advance of the upcoming holidays and scheduled public events. Targeted interventions are also being planned for areas with high burden of disease.

The Team continues to provide updates on the dengue outbreak to the community through a weekly radio spot at the national radio station and dissemination of print material about dengue prevention to the community.

The Communicable Disease Unit and the DEH Vector Control Program continue to investigate all reported cases of dengue fever and implement vector control measures.

The Palau Ministry of Health promotes the dengue 3S messages:
- Search and eliminate mosquito breeding sites.
- Self-protect by wearing insect repellent and ensuring a mosquito-free environment.
- Seek early consultation if you show severe signs or symptoms of dengue.

The next report for epi week 51 will be released on Tuesday, December 31, 2019.

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Lab Testing

- The Palau National Hospital (BNH) Laboratory and laboratories at three private clinics in Koror have the capacity to test symptomatic patients for dengue via a rapid diagnostic test kit, SD Bioline Dengue Duo (Dengue NS1 Ag + IgG/IgM) by Abbott.
- Confirmatory testing and serotyping is done by the Hawaii State Laboratory (HSL). There have been 266 serotyped cases of DENV-3. The last recorded cases of DENV-2 in Palau were from November of 2018.
- During week 37, 28 imported cases of dengue were identified with travel history to Bangkok, Thailand. Specimens were referred to Guam Public Health Laboratory (GPHL) for serotyping, which confirmed infection with DENV-1.
- No additional cases of dengue serotypes 1 and 4 have been identified since.
- Phylogenetic analysis of serum specimens sent to CDC Dengue Branch in Puerto Rico found that the circulating DENV-3 strains group into two lineages that originate in the Philippines and Singapore.

Response

Case Summary State and Hamlet

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>5-9</td>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>10-14</td>
<td>30</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>15-29</td>
<td>150</td>
<td>75</td>
<td>225</td>
</tr>
<tr>
<td>30-44</td>
<td>60</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>45-59</td>
<td>30</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>60+</td>
<td>10</td>
<td>5</td>
<td>15</td>
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<tr>
<td>Median age: 29 years</td>
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Epi Curve

Dengue Cases by Week of Diagnosis

December 3, 2018 – December 22, 2019

Symptom Profile of Cases

- Age range = 0 – 88 years
- Mean age = 29 years
- Median age = 24 years

Fever
Chills
Headache
Body pain
Joint pain
Loss of appetite
Altered taste sensation
Nausea
Vomiting
Cough
Eye pain
Abdominal pain
Rash

# of Cases with Each Symptom (Cases with available data = 370)

Dengue cases from December 16 – 22, 2019: n = 9