Dengue 3 Outbreak, Palau, December 2018 – June 2019
Report Date: June 4, 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. This poses a significant concern for public health as the whole population is potentially vulnerable to infection.

In response to the outbreak, the Ministry of Health activated its emergency response team on December 7, 2018. The team has been tasked with raising community awareness of the outbreak and dengue prevention measures, conducting disease surveillance and reporting, strengthening mosquito control measures, and ensuring adequate resources are available to combat the outbreak. Between May 27 – June 2, 2019, there were 14 new cases reported. This brings the total from December 1, 2018 to June 2, 2019 to 210 cases.

There have been no reported deaths attributed to dengue infection during this outbreak.

Demographics

Age range = 0 – 88 years
Mean age = 31 years
Median age = 26 years
Male:Female ratio= 119

The majority of cases during this outbreak have been Palauan.

Symptom Profile of Cases

# of Cases with Each Symptom (Cases with available data = 198 )

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

Cases by State and Koror Hamlets

<table>
<thead>
<tr>
<th>State</th>
<th>Jun</th>
<th>May</th>
<th>Apr</th>
<th>Mar</th>
<th>Feb</th>
<th>Jan</th>
<th>Dec</th>
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<tr>
<td>Total</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
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</table>

Cases by Gender and Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>10-19</td>
<td>30</td>
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<tr>
<td>40-59</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>60+</td>
<td>110</td>
<td>120</td>
</tr>
</tbody>
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Epi Curve

Dengue Cases by Week of Diagnosis
December 3, 2018 - June 2, 2019

Lab Testing

- The Belau National Hospital (BNH) Laboratory, four major community health centers throughout the island, and laboratories from three private clinics 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.
- The BNH Lab continues to send a sample of serum specimens to the Hawaii State Laboratory (HSL) for confirmation and serotyping for monitoring.
- There have been 117 serotyped cases of DENV-3. The last recorded cases of DENV-2 in Palau were from November of 2018.
- Specimens from the previous DENV-2 outbreak and the current DENV-3 outbreak were sent to CDC’s Dengue Branch in Puerto Rico for sequencing. Results are still pending.

Response Measures

This current outbreak of dengue 3 has lasted for half a year with no recorded deaths due to dengue infection. The virus has spread to most parts of the island, but most reported cases are still within the most populated state of Koror and nearby states (Airai and Aimelik). Increased community efforts for vector control are needed to curb the spread of the virus and to hasten the end of the outbreak.

The dengue outbreak response team continues its efforts to increase community awareness on the dengue outbreak and prevention measures through:

- Weekly radio talk shows at the national radio station and dissemination of print material about dengue prevention to the community.
- The Ministry of Health partnered with the Ministry of Education and Roll’Em Productions to host a dengue prevention contest for students to promote dengue awareness and the Year of Innovative Learning and Excellence. Final edits of the winning videos will be used in the awareness campaign.
- The Communicable Disease Unit and the DEH Vector Control Program continue to investigate reported cases of dengue fever and implement vector control measures.
- The Palau Ministry of Health’s community dengue prevention 35 message:
  - 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 will be released on Tuesday, June 4, 2019.

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