Dengue 3 Outbreak, Palau, December 2018 – January 2019
Report Date: January 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. This poses a significant concern for public health as the whole population is potentially vulnerable to infection. The first two confirmed cases of dengue-3 were encountered at the Belau National Hospital on October 28 and November 11.

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 January 7 – January 20, 2019, there were 5 new cases identified. This brings the total from December 1, 2018 to January 20, 2019 to 62 cases. There have been no deaths attributed to dengue infection during this outbreak.

Demographics
Age Range = 3 – 88 years
Mean age = 31 years
Median age = 26 years
Male:Femal ratio= 130

The majority of cases during this outbreak have been Palauan.

Ethnicity Count Percent
Palauan 46 74.2%
Bangladeshi 7 11.3%
Chinese 4 6.5%
Filipino 2 3.2%
Other Asian 3 4.8%
TOTAL 62

Symptom Profile of Cases

<table>
<thead>
<tr>
<th>Symptom</th>
<th># of Cases</th>
<th>Total cases= 62</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Chills</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Body pain</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Joint pain</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Loss of appetite</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Altered taste sensation</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Eye pain</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Vomiting</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Rash</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Cases by Date of Onset of Symptoms

Cases by State and Koror Hamlets

Lab Testing
- The Belau National Hospital (BNH) Laboratory and private clinics on-island continue to screen symptomatic patients for dengue with a rapid diagnostic test kit.
- The BNH Lab continues to send serum specimens to Hawaii State Laboratory (HSL) for confirmation and serotyping.
- 14 specimens were sent to HSL on January 17, 2018.
- The last recorded cases of DENV-2 were in November of 2018. Since the beginning of the outbreak, there have been 33 DENV-3 serotyped.
- BNH Lab is reaching out to regional labs in the Pacific to determine the origin of the strain of DEN-3 circulating in the country.

Response Measures
- The dengue outbreak response team is continuing efforts to increase community awareness on the dengue outbreak and prevention measures through:
  - Weekly radio talk shows at the national radio station
  - Dissemination of print material about dengue prevention to the community
  - Dengue prevention messaging on local television channels
  - Development of dengue prevention videos for public consumption that target young adults
- Utilizing public forums to spread the prevention message: Ministry of Health representatives attended PTA meetings at four public elementary schools throughout Palau (Ngardmau, Ngaremlengui, Ngarchelong and Koror) to share the 3S dengue prevention message with parents and educators.

CDC Medical Epidemiologist, Dr. Thane Hancock will present on dengue case management to healthcare providers from the Belau National Hospital and private clinics and assist local team with strengthening response efforts.

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

The Ministry of Health’s community dengue prevention 3S message is to:
- 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, January 29, 2019.

Contact:
Tmong Udui, Epidemiologist
epidemiologist@palauhealth.org