Dengue Outbreak Situation Report 1  
December 16 – 20, 2018

Summary
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. There is added concern over the risk of severe dengue in persons with subsequent infection with a different serotype of dengue. A large outbreak of dengue-2 concluded a year ago on December 8, 2017, however we have seen sporadic cases throughout the year.

The first two confirmed cases of dengue-3 were encountered at the Belau National Hospital on October 28 and November 11, however their serotype results did not become available until December 1, 2018. 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.

Updates
There was 1 confirmed case of dengue fever identified during the reporting period. This brings the total from December 1 – 20, 2018 to 27 cases.

Demographics
- A majority of cases (n=24) reside in the most populous state, Koror, in various hamlets.
- All but two hamlets in Koror have confirmed cases. More than half of identified cases reside in Madalaii hamlet in Koror. Others reside in Meketii, Meyuns, Dngeronger, Idid, Ngerbeched, Ngerchemai, Ngerkebesang, Ngerkesoaol, and Ngermid hamlets. One case reported having traveled to another state, Peleliu, during his exposure period. Three cases reside in the state of Airai.
- Most cases are within 20-29 years of age. Age range is 4 – 61 years of age; average: 27 years; median: 26 years.
• All cases are local residents, mostly Palauan (70%) with others including Bangladeshi, Chinese and Taiwanese nationals.
• Most common symptoms reported include: chills (92%), fever (88.5%), headache (84%), body aches (73%), joint pain (65%), loss of appetite (53.8%). Other symptoms experienced by less than half of cases include: eye pain, nausea, abdominal pain, vomiting and conjunctivitis.
• As of December 20, 2018, there were seven (7) patients (3 children and 4 adults) currently hospitalized for treatment of dengue fever.
• There have been no reported deaths attributed to dengue infection.

Laboratory Testing Activities and Needs
• The Belau National Hospital (BNH) Laboratory is screening symptomatic patients for dengue with a rapid diagnostic test kit, SD BIOLINE Dengue Duo by Abbott. The test is designed to detect both dengue virus NS1 antigen and antibodies to dengue virus (dengue IgG/IgM) in human serum, plasma, or whole blood. (continued)
• The BNH Lab sends serum specimens to Hawaii State Laboratory for confirmation and serotyping. Frequency of shipments has increased from once a month to once a week due to the outbreak.
• Between December 17 - 20, 2018:
  o Rapid Dengue Test results (BNH Laboratory):
    ▪ 1 NS1 positive result out of 35 tests done.
  o 81 serum specimens were sent on December 19, 2018 to Hawaii State Lab for Trioplex rRT-PCR testing for Zika, Dengue, and Chikungunya and dengue serotyping. Results are still pending.
• Private clinics are reporting all suspected and confirmed dengue cases to the Bureau of Public Health for response activities. The BNH Lab has received additional dengue rapid test kits and is able to continue support private labs with testing.
• The PIHOA Lab Revolving Fund (LRF) continues to support Palau’s reference testing at Hawaii State Lab for dengue.

Response activities and needs
• The dengue outbreak response team is still working to increase community awareness of the dengue outbreak and prevention measures especially during this holiday season.
  o A team of vector control specialists and MOH staff traveled to Peleliu state on Wednesday, December 19, 2018. One confirmed case reported travel to the state during their exposure period and the state was also affected during the last outbreak. The team distributed dengue prevention posters and conducted environmental assessments and focal spraying of insecticide.
  o The Ministry of Health is partnering with state governments to organize community clean-ups and other activities prevent further spread of dengue.
A dengue expert from the Republic of China, Taiwan will conduct a refresher training for clinicians on dengue epidemiology and the most recent treatment guidelines for dengue on Friday, December 21, 2018.

The Communicable Disease Unit and the DEH Vector Control Program continue to respond to reported cases of dengue fever.

Koror cases by hamlet
December 1 – 20, 2018, n = 24

The next report will be released on Friday, December 28, 2018.