Dengue Outbreak Situation Report 1
Epi Week 50 (December 10 – 16, 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. There have been 26 confirmed cases of dengue fever identified by the Bureau of Public Health from December 1 – 16, 2018. Serotype results for these 26 cases are still pending.

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.

Demographic data
- A majority of cases (n=24) reside in the most populous state, Koror, in various hamlets: Madalaii, Meketii, Meyuns, Dngeronger, Idid, Ngerbeched, Ngerchemai, Ngerkebesang, Ngerkesoaol, and Ngermid. Two cases reside in the state of Airai.
- 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.
- An equal number of males (n=13) and females (n=13) were reported.
- Age range is 4 – 61 years of age; average: 26 years; median: 25 years.

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 1 and December 16, 2018:
  o Rapid Dengue Test results (BNH Laboratory):
    ▪ 20 NS1 positive
    ▪ 6 IgM positive
  o Between Dec 6 – Dec 13, 68 serum specimens were sent to Hawaii State Lab for Trioplex rRT-PCR testing for Zika, Dengue, and Chikungunya. Results are still pending.
• In an effort to ensure that dengue patients encountered at the three private clinics in Palau are reported to the Bureau of Public Health, the Minister of Health has approved the weekly distribution of dengue rapid test kits to private clinics from the national laboratory.
• The Ministry of Health is procuring additional supplies of dengue rapid test kits to keep up with the testing demand at the local hospital and private clinics.
• The Palau ELC and PHEP programs will replenish their account with the PIHOA Lab Revolving Fund (LRF) to ensure support for laboratory confirmation and serotyping of dengue cases.

Response activities and needs
• As Palau experienced a large outbreak of dengue-2 just a year ago, the Ministry of Health is undertaking many of the same response measures.
• The dengue outbreak response team is working to increase community awareness of the dengue outbreak and prevention measures.
  o Dengue prevention posters and brochures with the 3S message have been distributed throughout the community.
  o There have been 3 radio talk shows held to share information about the outbreak to the community.
  o The emergency response team has reached out to state governments to communicate the need for community clean-ups and other activities to reduce mosquito breeding sites and stop the spread of dengue.
• The Ministry of Health’s community dengue prevention 3S message is to:
  o Search and eliminate mosquito breeding sites.
  o Self-protect by wearing insect repellent and ensuring a mosquito-free environment.
  o Seek early consultation if you show signs or symptoms of dengue.
• Refresher trainings for clinicians on dengue epidemiology and the most recent treatment guidelines for dengue set for Friday, December 21, 2018.
• The Communicable Disease Unit nurses investigate every reported case of dengue and notify the Division of Environmental Health’s Vector Control Program (DEH VCC).
• The DEH VCC is currently conducting household environmental assessments of all case homes and focal spraying up to 200 feet from the home.