

Dengue 3 Outbreak, Palau, December 2018 – August 2019

Report Date: August 6, 2019



Outbreak Overview

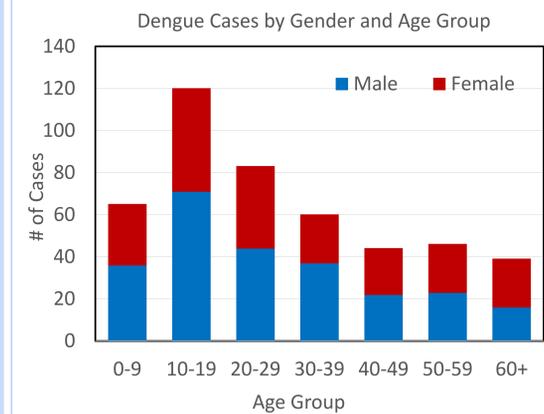
On Friday, December 7, 2018, the Palau Ministry of Health alerted the public of an outbreak of dengue fever following the first ever laboratory confirmation of two cases with dengue serotype-3. This poses a significant concern for public health as the whole population is potentially vulnerable to infection.

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 environmental control measures, and ensuring adequate resources are available to combat the outbreak.

Between July 29 – August 4, 2019, there were 36 new cases and 3 old cases reported. This brings the total from December 1, 2018 to July 28, 2019 to 457 cases.

There has been one death attributed to dengue infection during this outbreak.

Demographics

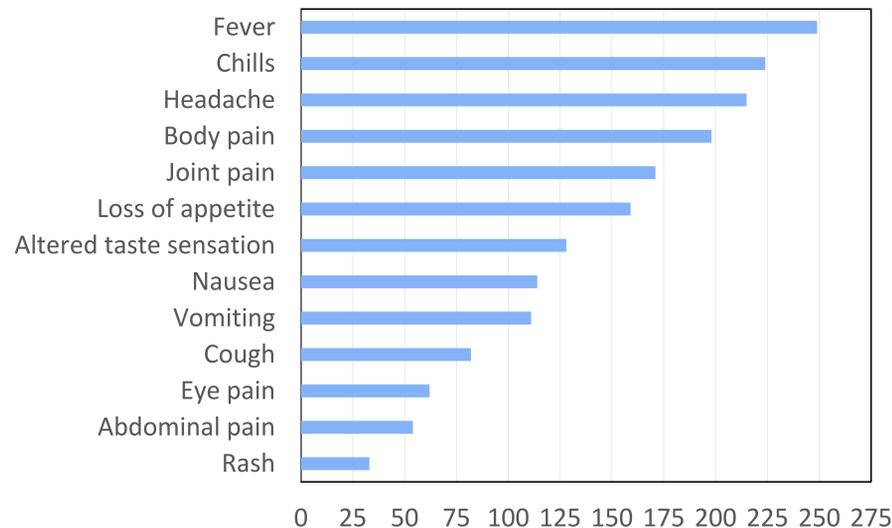


Age range = 0 – 88 years
 Mean age = 29 years
 Median age = 25 years
 Male:Female ratio= 117:100
 The majority of cases during this outbreak have been Palauan.

Ethnicity	Count	%
Palauan	388	85%
Bangladeshi	27	6%
Filipino	17	4%
Chinese	10	2%
Other	15	3%
TOTAL	457	

Symptom Profile of Cases

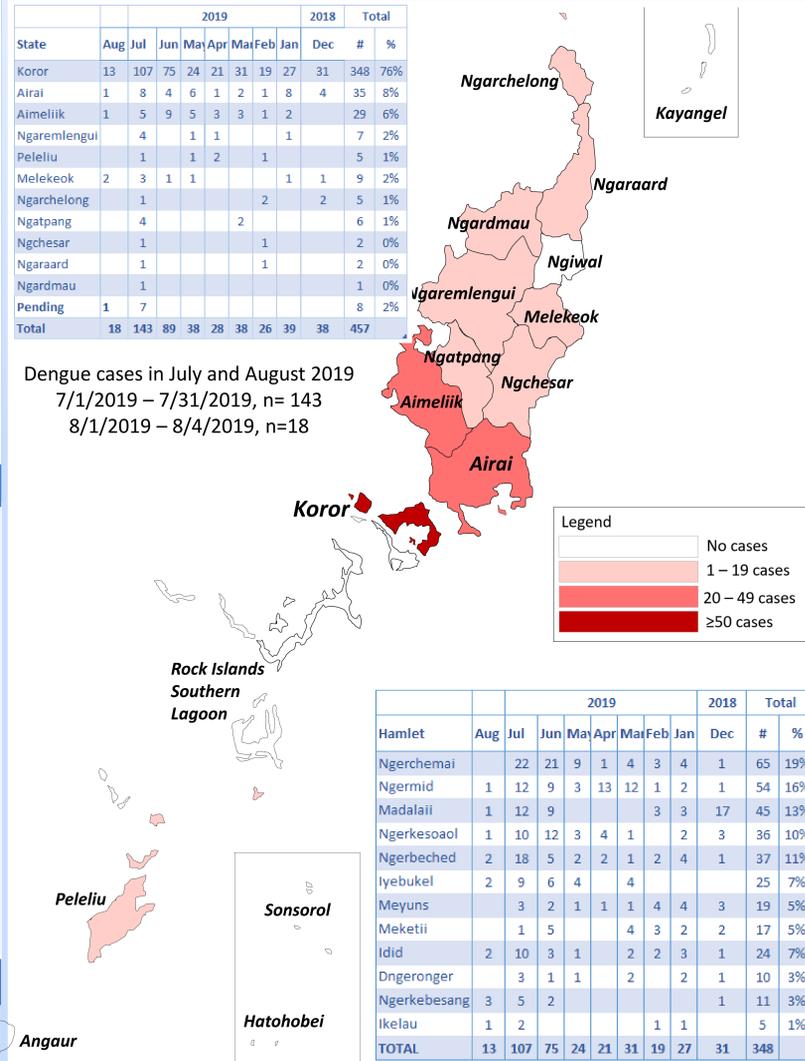
of Cases with Each Symptom (Cases with available data = 279)



Cases by State and Koror Hamlets

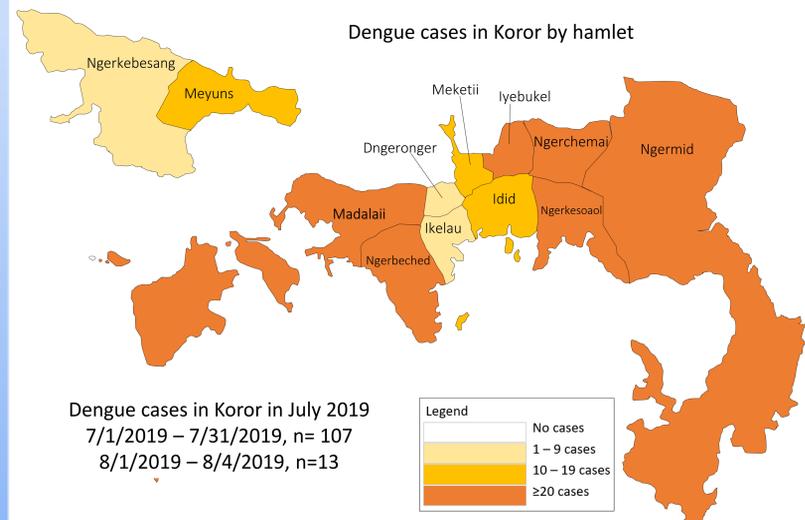
State	2019												2018	Total
	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	#	%			
Koror	13	107	75	24	21	31	19	27	31	348	76%			
Airai	1	8	4	6	1	2	1	8	4	35	8%			
Aimeliik	1	5	9	5	3	3	1	2		29	6%			
Ngaremlengui	4		1	1				1		7	2%			
Peleliu	1		1	2			1			5	1%			
Melekeok	2	3	1	1				1	1	9	2%			
Ngarchelong	1						2			2	1%			
Ngatpang	4					2				6	1%			
Ngchesar	1						1			2	0%			
Ngaraard	1						1			2	0%			
Ngardmau	1									1	0%			
Pending	1	7								8	2%			
Total	18	143	89	38	28	38	26	39	38	457				

Dengue cases in July and August 2019
 7/1/2019 – 7/31/2019, n= 143
 8/1/2019 – 8/4/2019, n=18



Hamlet	2019												2018	Total
	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	#	%			
Ngerchemai	22	21	9	1	4	3	4	1	65	19%				
Ngermid	1	12	9	3	13	12	1	2	1	54	16%			
Madalali	1	12	9			3	3	3	17	45	13%			
Ngerkesoal	1	10	12	3	4	1		2	3	36	10%			
Ngerbeched	2	18	5	2	2	1	2	4	1	37	11%			
Iyebukel	2	9	6	4		4				25	7%			
Meyuns	3	2	1	1	1	1	4	4	3	19	5%			
Meketii		1	5			4	3	2	2	17	5%			
Idid	2	10	3	1		2	2	3	1	24	7%			
Dngeronger		3	1	1		2		2	1	10	3%			
Ngerkebesang	3	5	2						1	11	3%			
Ikelau	1	2					1	1		5	1%			
TOTAL	13	107	75	24	21	31	19	27	31	348				

Dengue cases in Koror by hamlet

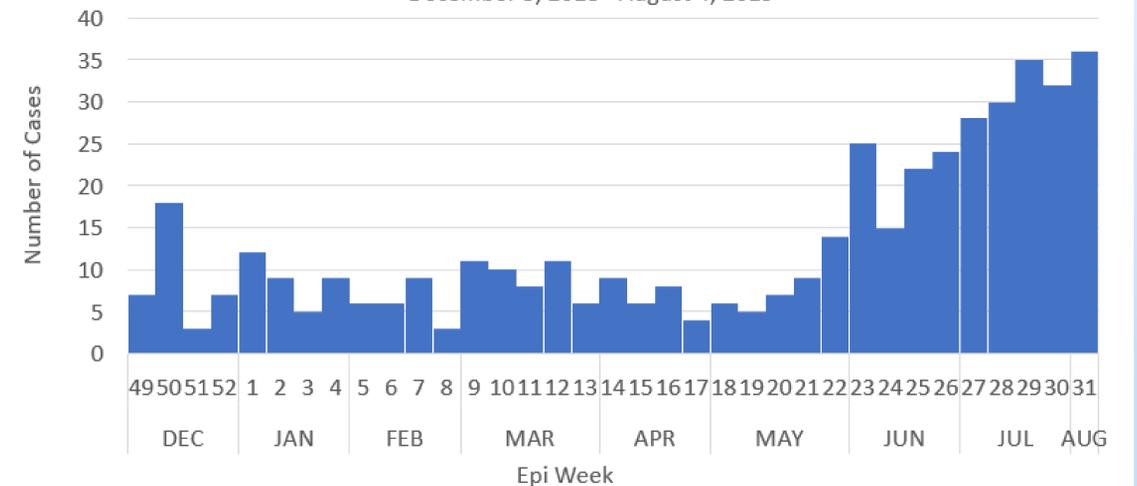


Dengue cases in Koror in July 2019
 7/1/2019 – 7/31/2019, n= 107
 8/1/2019 – 8/4/2019, n=13

Epi Curve

Dengue Cases by Week of Diagnosis

December 3, 2018 - August 4, 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.
- Human 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

Dengue infections are increasing rapidly. The areas that are most affected include the most populated state of Koror and nearby states (Airai and Aimeliik), however, there have been cases reported from 11 out of 16 states in Palau. Increased community efforts for vector control are needed to curb the spread of the virus, during summer vacation for young residents (>19 years old) who represent the greatest proportion (40%) of dengue cases during this outbreak.

The dengue outbreak response team continues its efforts to increase community awareness on the dengue outbreak and the importance of community prevention measures through weekly radio talk shows at the national radio station, dissemination of print material about dengue prevention to the community and production of dengue prevention videos aimed at young adults.

Efforts are underway to increase community participation in vector control activities through partnership with state governments and other community organizations.

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 3S 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, August 13, 2019.