

# Dengue 3 Outbreak, Palau, December 2018 – June 2019

Report Date: June 18, 2019



## Outbreak Overview

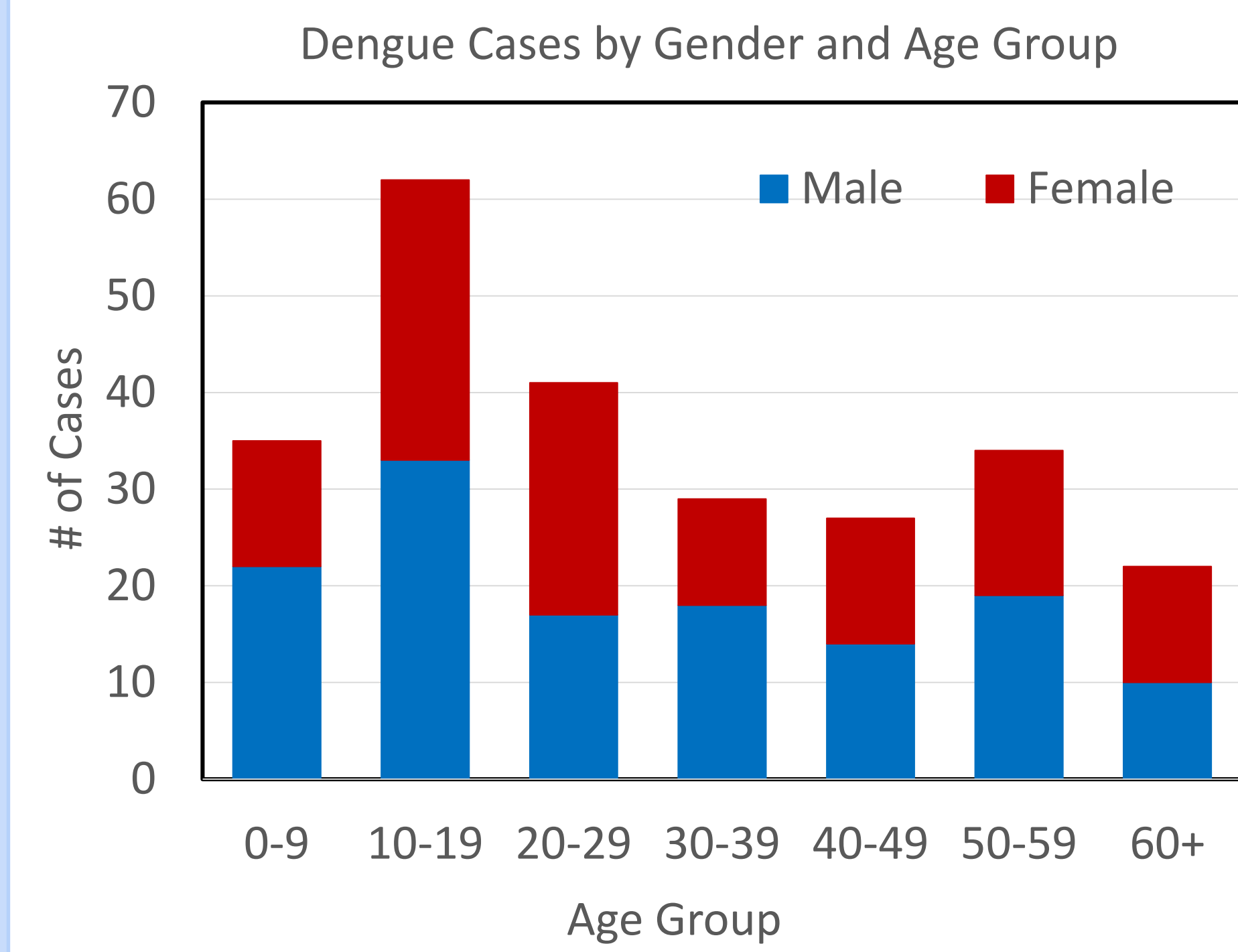
On Friday, December 7, 2018, the Palau Ministry of Health alerted the public of an outbreak of dengue fever following the first ever laboratory confirmation of two cases with dengue serotype-3. This poses a significant concern for public health as the whole population is potentially vulnerable to infection.

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 June 10 – June 16, 2019, there were 15 new cases reported. This brings the total from December 1, 2018 to June 16, 2019 to 250 cases.

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

## Demographics

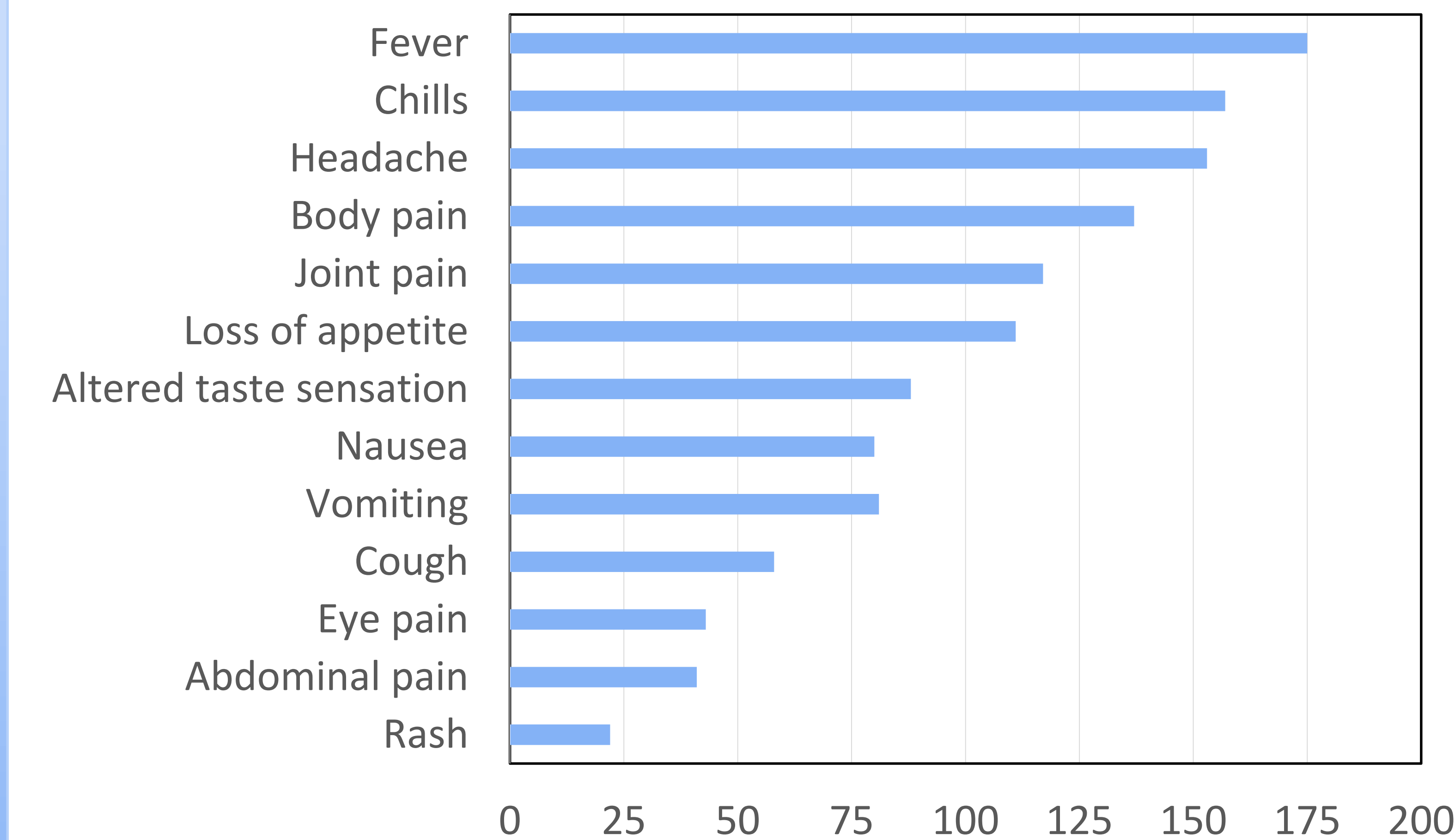


Age range = 0 – 88 years  
 Mean age = 31 years  
 Median age = 25 years  
 Male:Female ratio= 114  
 The majority of cases during this outbreak have been Palauan.

Ethnicity	Count	%
Palauan	214	86%
Bangladeshi	13	5%
Filipino	8	3%
Chinese	6	2%
Other	9	4%
<b>TOTAL</b>	<b>250</b>	

## Symptom Profile of Cases

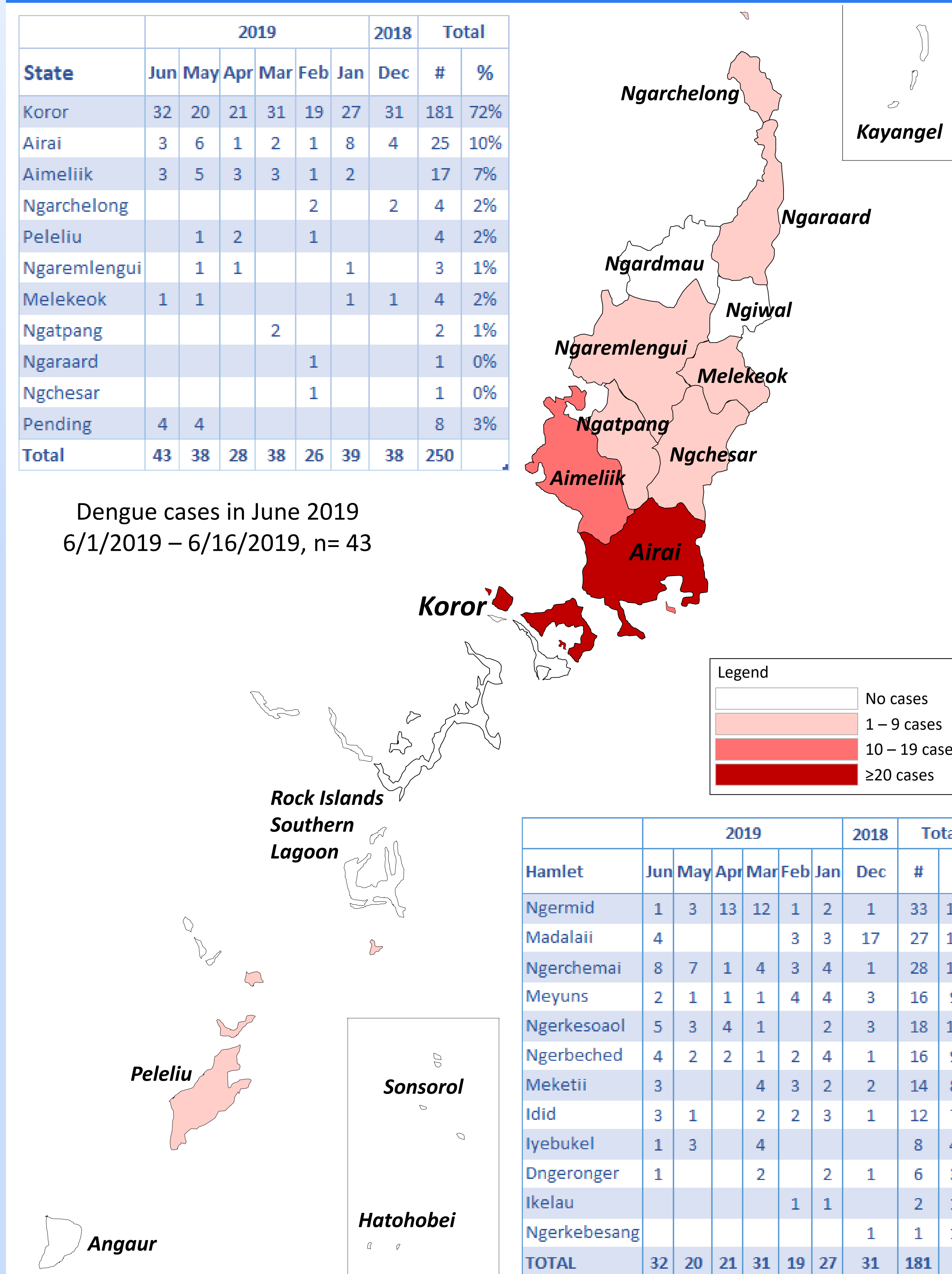
# of Cases with Each Symptom (Cases with available data = 220)



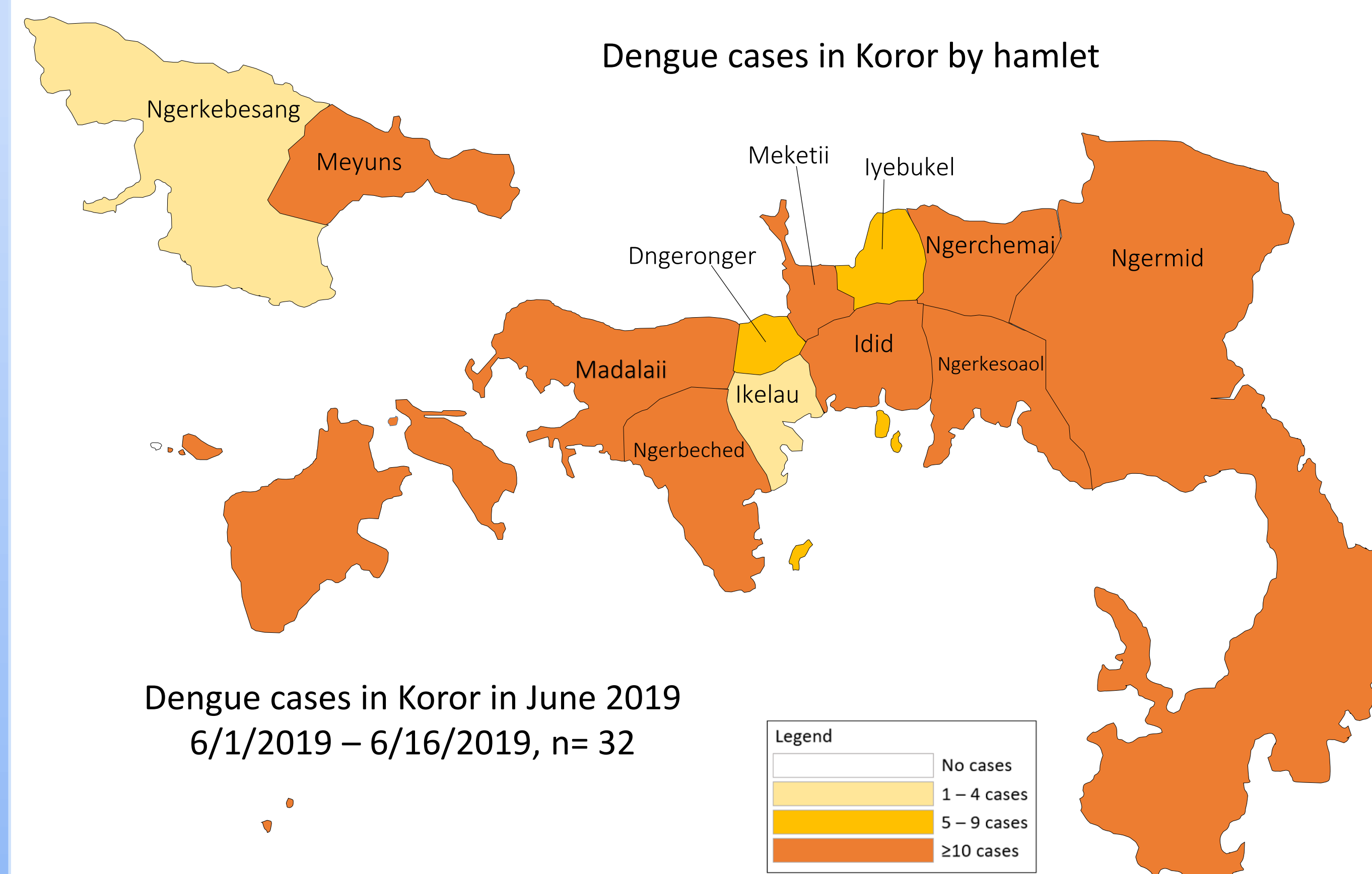
## Cases by State and Koror Hamlets

State	2019							2018	Total	#	%
	Jun	May	Apr	Mar	Feb	Jan	Dec				
Koror	32	20	21	31	19	27	31	181	72%		
Airai	3	6	1	2	1	8	4	25	10%		
Aimeliik	3	5	3	3	1	2		17	7%		
Ngarchelong					2		2	4	2%		
Peleliu		1	2		1			4	2%		
Ngaremlengui		1	1			1		3	1%		
Melekeok	1	1				1	1	4	2%		
Ngatpang				2				2	1%		
Ngaraard					1			1	0%		
Ngchesar					1			1	0%		
Pending	4	4						8	3%		
<b>Total</b>	<b>43</b>	<b>38</b>	<b>28</b>	<b>38</b>	<b>26</b>	<b>39</b>	<b>38</b>	<b>250</b>			

Dengue cases in June 2019  
 6/1/2019 – 6/16/2019, n= 43



Hamlet	2019							2018	Total	#	%
	Jun	May	Apr	Mar	Feb	Jan	Dec				
Ngermid	1	3	13	12	1	2	1	33	18%		
Madalaii	4				3	3	3	17	27		
Ngerchemai	8	7	1	4	3	4	1	28	15%		
Meyuns	2	1	1	1	4	4	3	16	9%		
Ngerkesoal	5	3	4	1		2	3	18	10%		
Ngerbeched	4	2	2	1	2	4	1	16	9%		
Meketii	3			4	3	2	2	14	8%		
Idid	3	1		2	2	3	1	12	7%		
Iyebukel	1	3		4				8	4%		
Dngeronger	1				2		1	6	3%		
Ikelaui					1	1		2	1%		
Ngerkebesang							1	1	1%		
<b>TOTAL</b>	<b>32</b>	<b>20</b>	<b>21</b>	<b>31</b>	<b>19</b>	<b>27</b>	<b>31</b>	<b>181</b>			

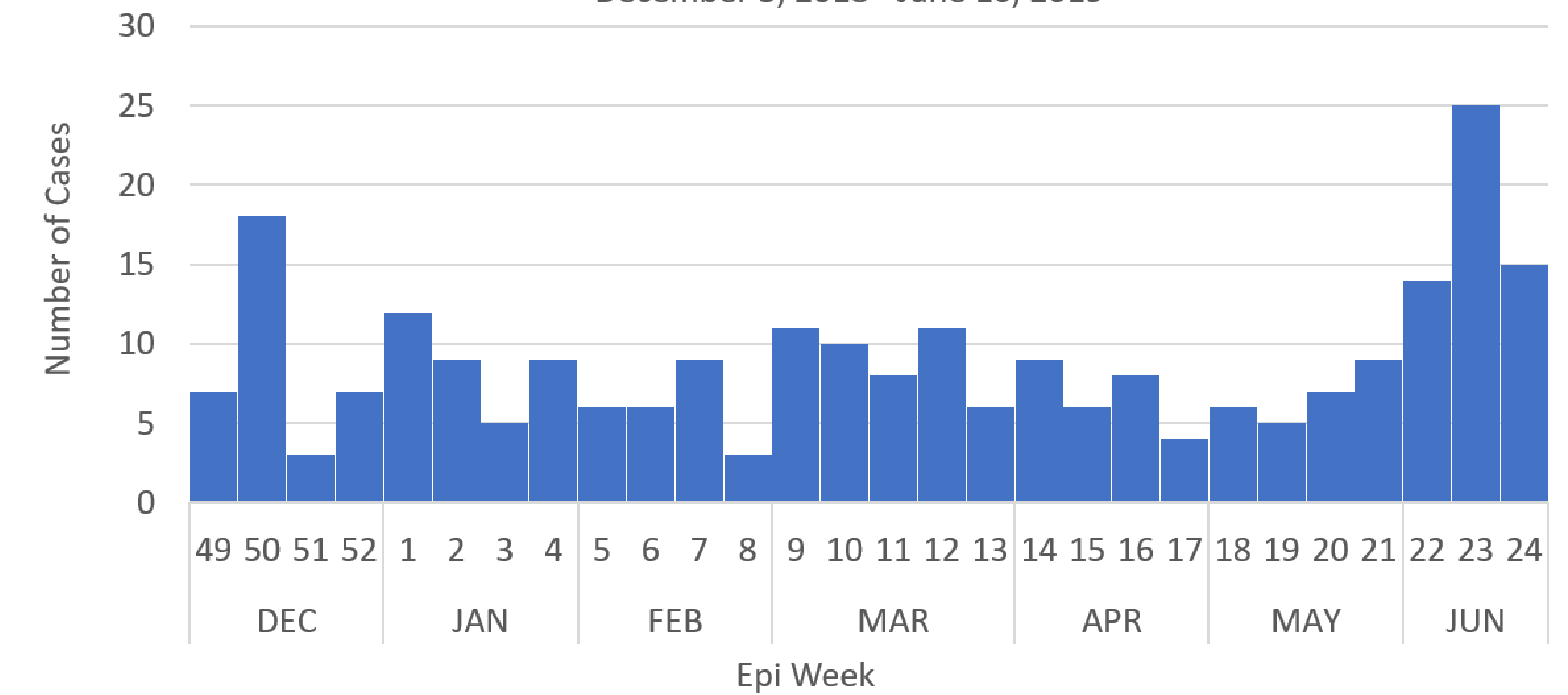


Dengue cases in Koror in June 2019  
 6/1/2019 – 6/16/2019, n= 32

## Epi Curve

### Dengue Cases by Week of Diagnosis

December 3, 2018 - June 16, 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

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 10 out of 16 states. Increased community efforts for vector control are needed to curb the spread of the virus especially since summer vacation has begun for young residents (10 – 19 years old) who represent the greatest proportion of dengue cases during this 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, dissemination of print material about dengue prevention to the community and production of dengue prevention videos
- Dissemination of a donation of mosquito repellent wipes to the greater community and athletes during the Belau Games. The repellent wipes are a donation from the US Strategic National Stockpile (SNS).

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, June 25, 2019.