

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

Epi Week 41: October 7 – 13, 2019



## Outbreak Overview

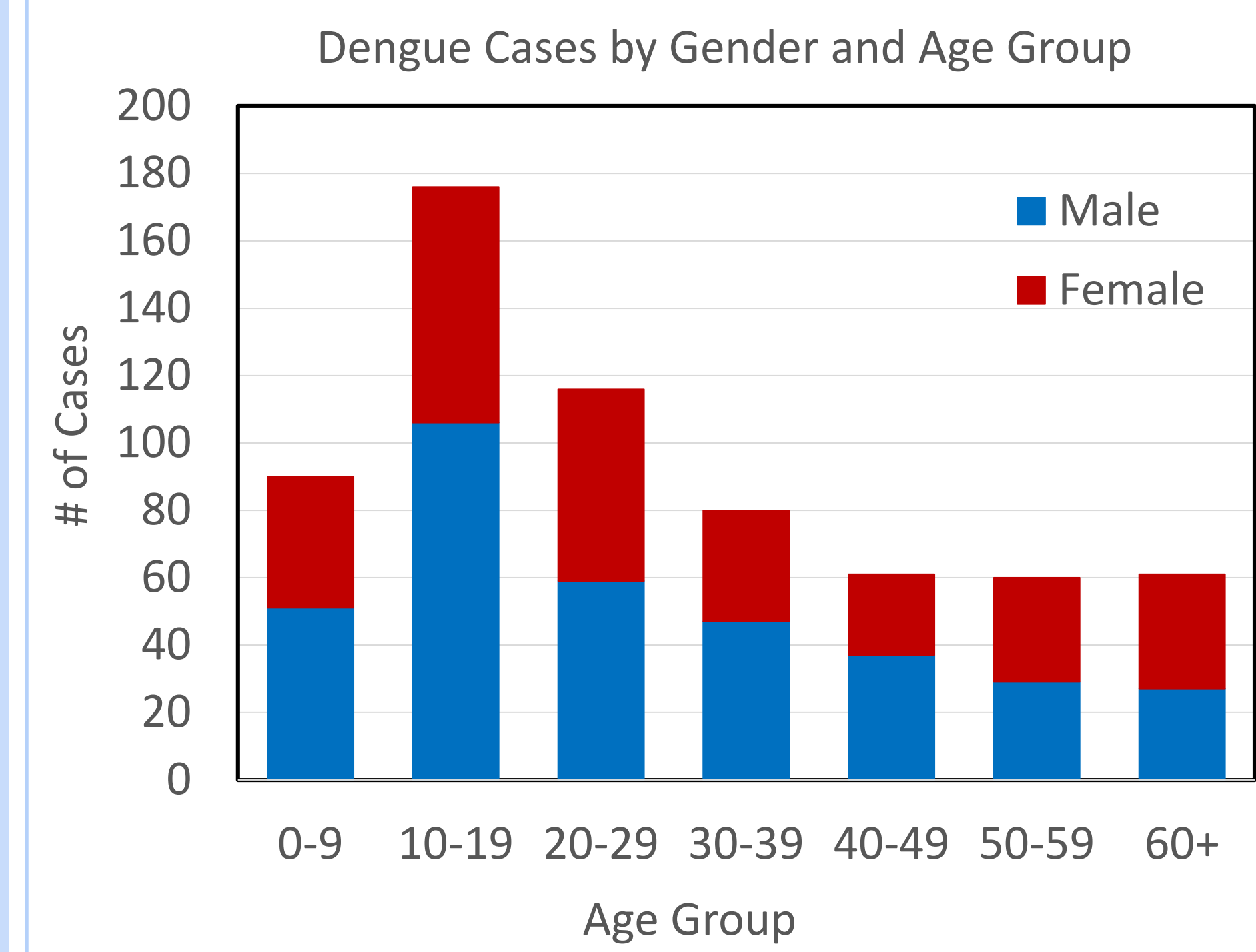
On Friday, December 7, 2018, the Palau Ministry of Health alerted the public of an outbreak of dengue fever following the first ever laboratory confirmation of two cases with dengue serotype-3. This poses a significant concern for public health as the whole population is potentially vulnerable to infection.

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 October 7 - 13, 2019, there were 10 new cases reported. This brings the total for the month of October 2019 to 15 and from December 1, 2018 - October 13, 2019 to 644 cases.**

There have been two deaths attributed to dengue infection during this outbreak.

## Demographics



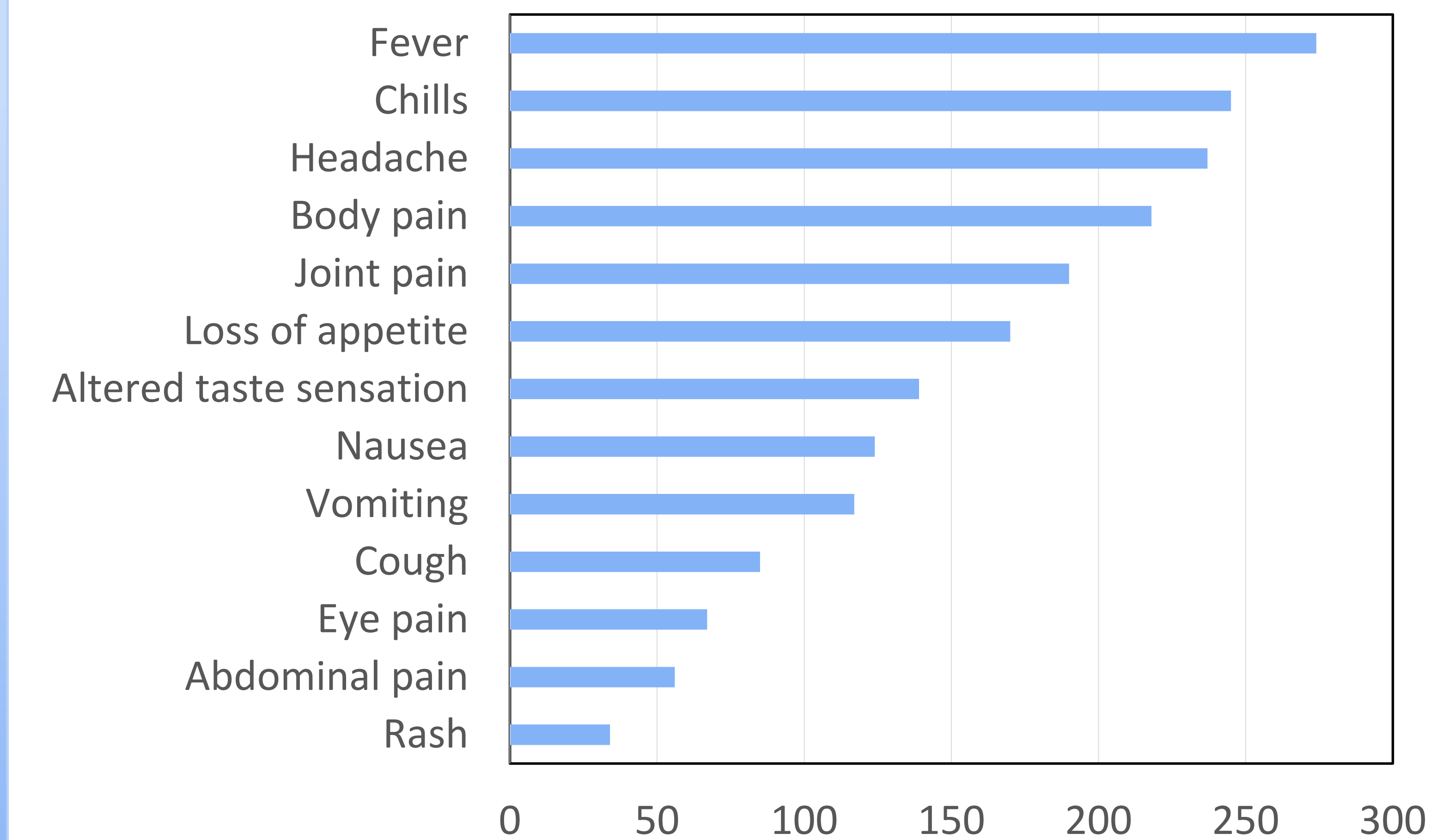
Age range = 0 – 88 years  
Mean age = 29 years  
Median age = 24 years

The majority of cases during this outbreak have been Palauan.

Ethnicity	Count	%
Palauan	547	85%
Bangladeshi	37	6%
Filipino	23	4%
Chinese	14	2%
Other	23	4%
<b>TOTAL</b>	<b>644</b>	

## Symptom Profile of Cases

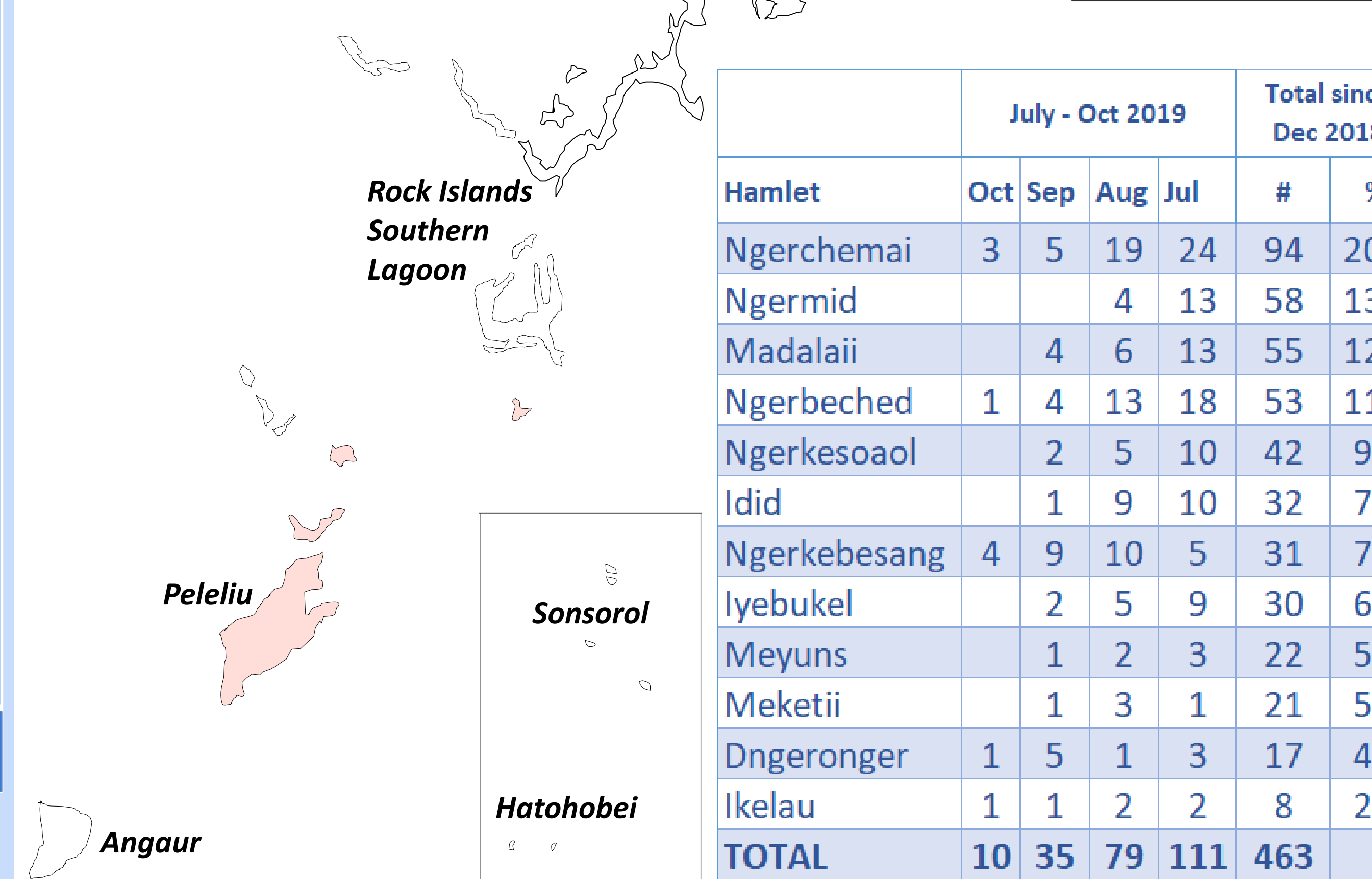
# of Cases with Each Symptom (Cases with available data = 340)



## Cases by State and Koror Hamlets

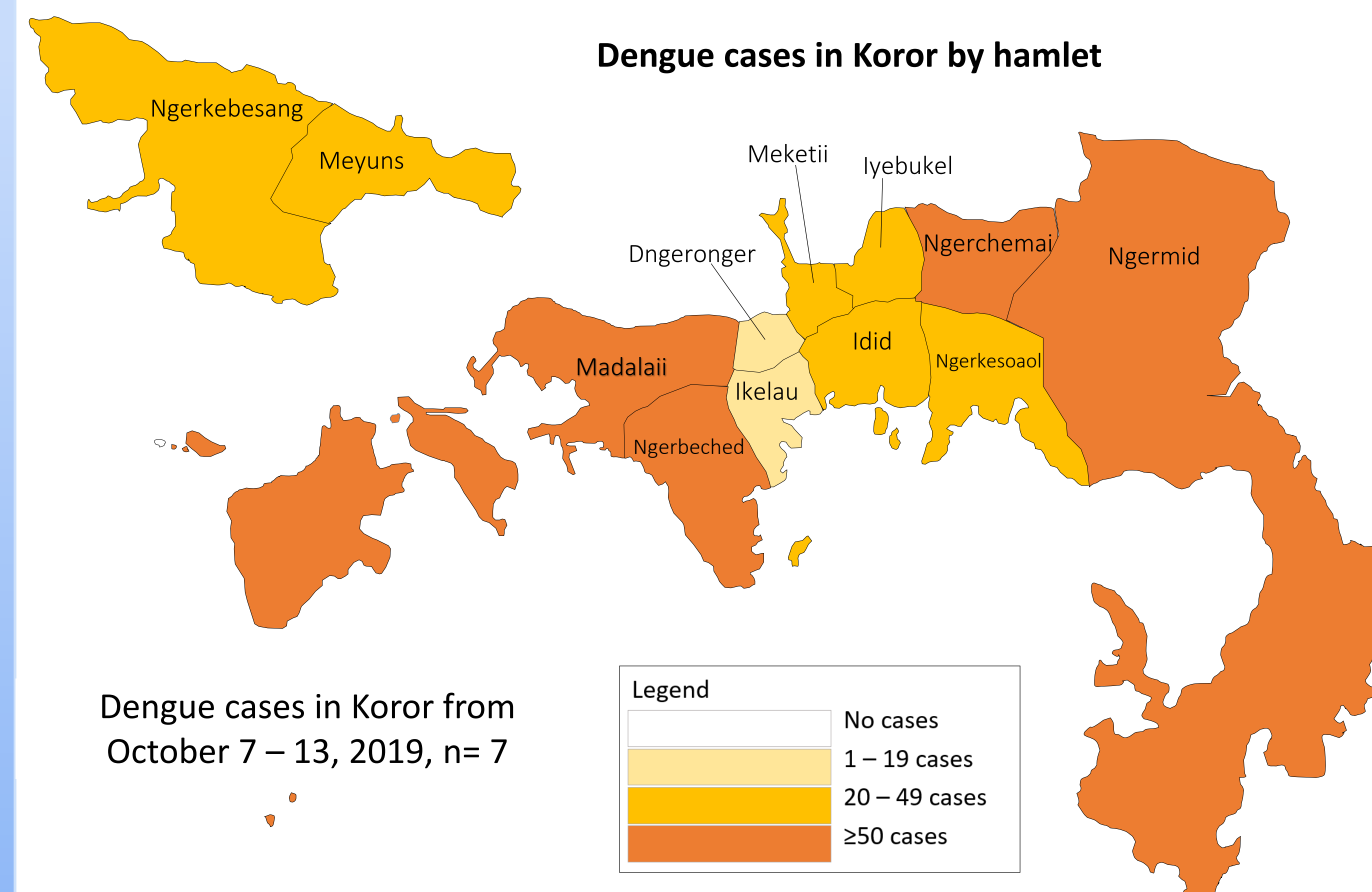
State	July - Oct 2019				Total since Dec 2018	
	Oct	Sep	Aug	Jul	#	%
Koror	10	35	79	111	463	72%
Airai	4	8	12	9	59	9%
Aimeliik		2	1	4	30	5%
Melekeok		3	11	3	21	3%
Ngaremlengui		6	3	4	16	2%
Ngatpang			6	4	12	2%
Ngarchelong		1	2	1	8	1%
Ngaraard		1	5	1	8	1%
Ngiwal		1	2	4	7	1%
Peleliu				1	5	1%
Ngchesar				1	2	0%
Ngardmau		1		1	2	0%
Kayangel				1	1	0%
Tourist		3	1		4	1%
Pending		3	2	1	6	1%
<b>TOTAL</b>	<b>15</b>	<b>65</b>	<b>127</b>	<b>141</b>	<b>644</b>	

Dengue cases from: October 7 – 13, 2019, n= 10



Hamlet	July - Oct 2019				Total since Dec 2018	
	Oct	Sep	Aug	Jul	#	%
Ngerchemai	3	5	19	24	94	20%
Ngermid			4	13	58	13%
Madalaii			4	6	13	12%
Ngerbeched	1	4	13	18	53	11%
Ngerkesoal		2	5	10	42	9%
Idid		1	9	10	32	7%
Ngerkebesang	4	9	10	5	31	7%
Iyebukel		2	5	9	30	6%
Meyuns		1	2	3	22	5%
Meketii		1	3	1	21	5%
Dngeronger	1	5	1	3	17	4%
Ikelau	1	1	2	2	8	2%
<b>TOTAL</b>	<b>10</b>	<b>35</b>	<b>79</b>	<b>111</b>	<b>463</b>	

## Dengue cases in Koror by hamlet

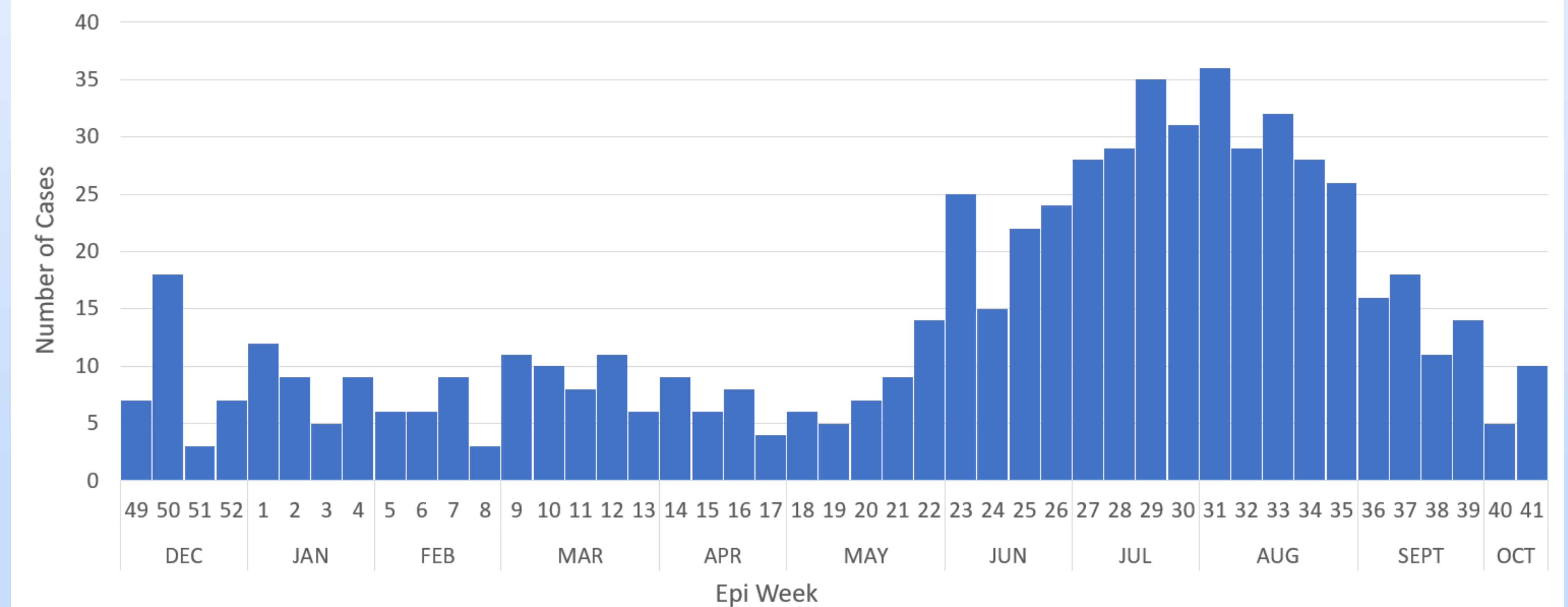


Dengue cases in Koror from October 7 – 13, 2019, n= 7

## Epi Curve

Dengue Cases by Week of Diagnosis

December 3, 2018 - October 13, 2019



## Lab Testing

- The Belau National Hospital (BNH) Laboratory and laboratories at three private clinics in Koror 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.
- Confirmatory testing and serotyping is done by the Hawaii State Laboratory (HSL) and Guam Public Health Laboratory (GPHL).
- There have been 160 serotyped cases of DENV-3. The last recorded cases of DENV-2 in Palau were from November of 2018.
- During week 37, two imported cases of dengue were identified with travel history to Bangkok, Thailand. Specimens were referred to Guam Public Health Laboratory (GPHL) for serotyping, which confirmed infection with DENV-1.

## Response Measures

The incidence of dengue cases continues to decline. During the second week of October there were 10 new cases of dengue reported. The greatest burden of the outbreak remains to be on the most populous state of Koror. The Koror State Government launched a clean-up campaign that removed around 210 tons of waste from residences in Koror hamlets over 6 weekends in August and September. The waste included 71 non-operational vehicles and several tons of tires which could have contributed to mosquito breeding in the environment.

The Ministry of Health Dengue Response Team continues to promote efforts to increase community involvement in vector source reduction activities through partnership with state governments and other community organizations.

The Team continues to provide updates on the dengue outbreak to the community through a weekly radio spot at the national radio station and dissemination of print material about dengue prevention to the community.

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

The Palau Ministry of Health promotes the dengue 3S messages:

- 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 for epi week 42 will be released on Tuesday, October 22, 2019.