



Zika Virus & Dengue Fever
Kosrae State, Federated States of Micronesia
 Report date: Jan 31, 2017
 Situation Report #22 (2016 Week 4-52, 2017 Week 1-4)
 Kosrae EpiNet Team



Zika and Dengue Outbreak Overview

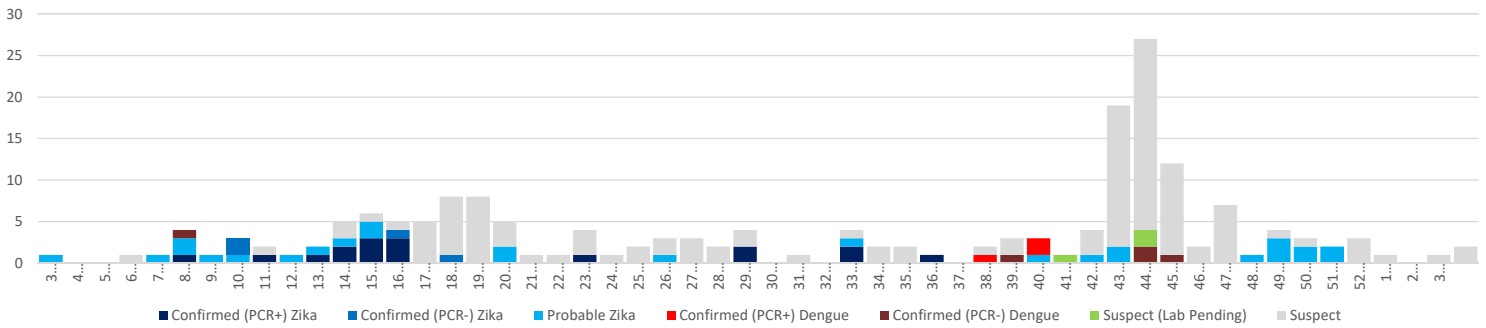
On March 15, 2016 Kosrae State was notified of its first confirmed case of Zika. Kosrae subsequently implemented routine Zika/Dengue/Chikungunya testing of all pregnant women. On October 21st, routine testing of pregnant women identified a concurrent Dengue Fever outbreak in Kosrae. Medical records reviews and active surveillance have identified 280 Zika Virus and Dengue Fever symptomatic cases of Zika Virus disease in Kosrae since January 2016. Overall 23 Confirmed Zika Cases and 12 Confirmed Dengue Cases have been identified since beginning of 2016.

Case Definitions

Suspect Zika: Rash AND/OR Fever AND any: retro-orbital pain, arthritis, non-purulent conjunctivitis, red eyes, body aches, edema, headache or malaise
Suspect Dengue: Fever and two (2) of the following: anorexia and nausea, rash, aches and pains, warning signs, or Leukopenia (WBC<4000/mL). Warning signs: abdominal pain, vomiting, mucosal bleed/petechiae, lethargy, clinical fluid accumulation, enlarged liver

2016 and 2017 Symptomatic Zika and Dengue Cases by Week of Onset (n = 280)

Epi Curve for Symptomatic Cases



General Case Counts

Zika Virus Testing		
Symptomatic	Case Count	Latest Onset Date
Confirmed (PCR+) Zika	17	9/6/2016
Confirmed (PCR-) Zika*	2	5/3/2016
Probable Zika***	27	12/19/2016
Asymptomatic		
Case Count	Latest Date of Visit (asym)	
Confirmed (PCR+) Zika	4	9/20/2016
Confirmed (PCR-) Zika*	0	
Probable Zika***	4	1/5/2017
Testing pending	10	1/17/2017
Testing negative	33	1/10/2017
Testing status unk	9	1/24/2017
Dengue Virus Testing		
Symptomatic	Case Count	Latest Onset Date
Confirmed (PCR+) Dengue	3	10/5/2016
Confirmed (PCR-) Dengue**	5	11/9/2016
Asymptomatic		
Case Count	Latest Date of Visit (asym)	
Confirmed (PCR+) Dengue	3	10/4/2016
Confirmed (PCR-) Dengue**	1	9/27/2016
Suspect Cases (Zika or Dengue)		
Case Count	Latest Onset Date	
Symptomatic (untested/specimen status unk)	127	1/27/2017
Symptomatic (tests pending)	5	10/31/2016
Symptomatic Negative	94	1/20/2017

*Positive ZIKV IgM with positive PRNT against ZIKV and negative PRNT against dengue virus

**Positive PRNT against Dengue with negative PRNT against ZIKV or Positive Dengue NS1

***Positive ZIKV IgM with positive PRNT against ZIKV and dengue virus OR positive ZIKV IgM with negative dengue virus IgM and no PRNT performed yet

Zika/Dengue Cases by Municipality

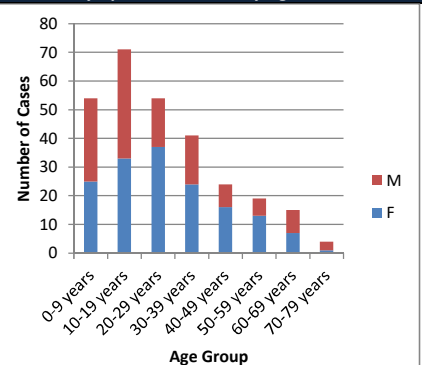
**Attack rates per 1000 pop

Municipality	Cases	Attack Rate
Tafunsaak:	104	47.86
Confirmed (PCR+) Zika	11	
Confirmed (PCR-) Zika	1	
Probable Zika	9	
Confirmed (PCR+) Dengue	1	
Confirmed (PCR-) Dengue	2	
Utwe:	34	34.59
Confirmed (PCR+) Zika	1	
Confirmed (PCR-) Zika	0	
Probable Zika	8	
Confirmed (PCR+) Dengue	1	
Confirmed (PCR-) Dengue	0	



Cases in Lelu:	92
Confirmed (PCR+) Zika	3
Confirmed (PCR-) Zika	1
Probable Zika	6
Confirmed (PCR+) Dengue	1
Confirmed (PCR-) Dengue	1
Attack Rate	42.59
Cases in Malem:	50
Confirmed (PCR+) Zika	2
Confirmed (PCR-) Zika	0
Probable Zika	4
Confirmed (PCR+) Dengue	0
Confirmed (PCR-) Dengue	2
Attack Rate	38.46

All Symptomatic Cases by Age and Sex



Response Measures (Week 4)

- Adulticiding, larviciding, and distribution of mosquito repellent to households were conducted in areas with recent suspected Zika or Dengue transmission. Most of the island has been sprayed within the last 2 weeks based on evidence of recent transmission. The vector control team is now aiming to spray the remainder island within the next week.
- All pregnant women were surveyed on January 28th to evaluate the utility of the Zika pregnancy kits. Refills of repellents were distributed to all pregnant women.
- Active case finding was conducted on January 28th in communities in all 4 municipalities. No new cases were identified via this surge activity.