

The



EPI gazette

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Mosquitos Prevention and Control



Due to recent attention about the Zika virus, the Florida Department of Health in Seminole County would like to highlight mosquito control methods to prevent vector-borne diseases.

According to Nuwer (2014), diseases

transmitted from mosquito bites are estimated to kill 725,000 people worldwide annually. Mosquitoes can transmit protozoans, viruses, and worms that cause diseases such as Eastern Equine Encephalitis (EEE), Malaria, and St. Louis Encephalitis (SLE). As a transmitter for vector-borne diseases, mosquitoes are a public health nuisance due to the diseases animals and humans catch from their bites. Currently, Florida is the home to 76 mosquito species. *Aedes albopictus* and *Aedes aegypti* are the dominant mosquitoes in Seminole County. These mosquitoes can carry more than 22 arthropod borne viruses including Chikungunya fever, Dengue fever, West Nile virus (WNV), Yellow Fever, and Zika virus. Another issue with mosquito bites are skin irritations from the allergic reaction to their saliva, which produces red bumps and itching.

Aedes aegypti originated in Africa, but has migrated globally throughout the tropical, subtropical, and parts of the temperate world due to global trade. These mosquitoes have a high vectorial

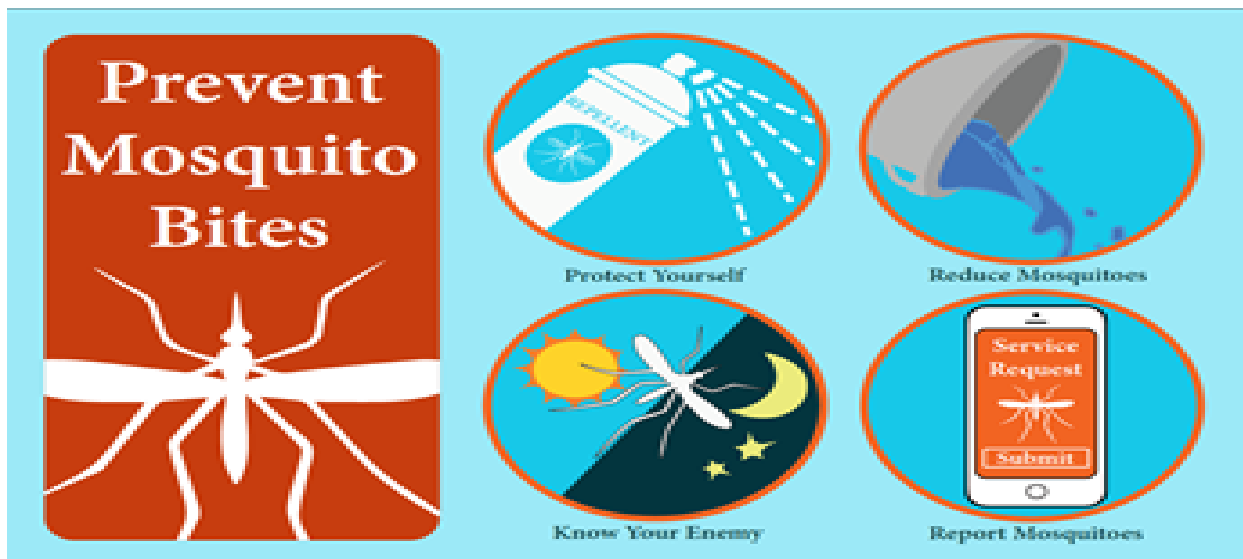
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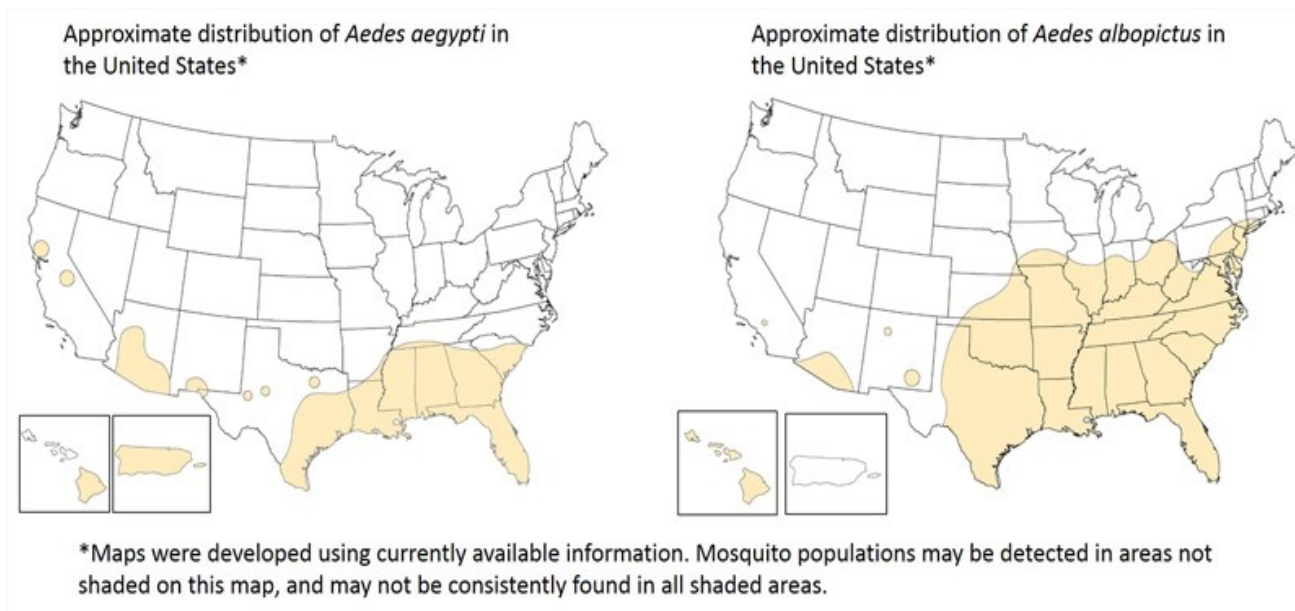
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capacity. *Aedes albopictus* originated in Asia and has migrated globally throughout the tropical, subtropical, and temperate world through international trade shipping. Both mosquitoes have adapted to surviving in a broad range of temperatures from cooler to hot temperatures. These mosquitoes like to live close to human habitat. *Ae. aegypti* and *Ae. albopictus* use natural and artificial water holding containers to lay their eggs (Centers for Disease Control and Prevention (CDC), 2016).



In order to minimize mosquito populations and reduce Seminole County residents' health risk, vector surveillance and mosquito management are conducted through Seminole County Mosquito Control. Seminole County Mosquito Control's objective is to measure human risk by determining local vector presence and abundance. Outreach programs are also available to educate residents about how to protect themselves and eliminate mosquitoes from their property. Aerosol sprayers (fogging) and ultra-low volume (ULV) are methods used to control mosquito populations. Aerosol spraying are conducted late evenings and early mornings by spraying pesticides in city limits.

If needed, ultra-low volume (ULV) treatments are used around Seminole County unincorporated areas to kill large infestation populations of mosquitos. This treatment usually occurs after a hurricane. For more information about Seminole County Mosquitos Control services, please see their website at <http://www.seminolecountyfl.gov/departments-services/public-works/watershed-management/mosquito-control-program/>



Approximate distribution of *Aedes aegypti* and *Aedes albopictus* in the United States maps (CDC, 2016, para.7)

References

Centers for Disease Control and Prevention. (2016). Surveillance and Control of *Aedes aegypti* and *Aedes albopictus* in the United States. Retrieved from <http://www.cdc.gov/chikungunya/resources/vector-control.html>

Nuwer, Rachel. (2014, April 30). Mosquitoes Kill More Humans Than Human Murderers Do. Smithsonian.com. Retrieved from <http://www.smithsonianmag.com/smart-news/mosquitoes-kill-more-humans-human-murderers-do-180951272/?no-ist>

Seminole County Florida. (2016). Mosquito Control Program. Retrieved from <http://www.seminolecountyfl.gov/departments-services/public-works/watershed-management/mosquito-control-program/>

Influenza Surveillance

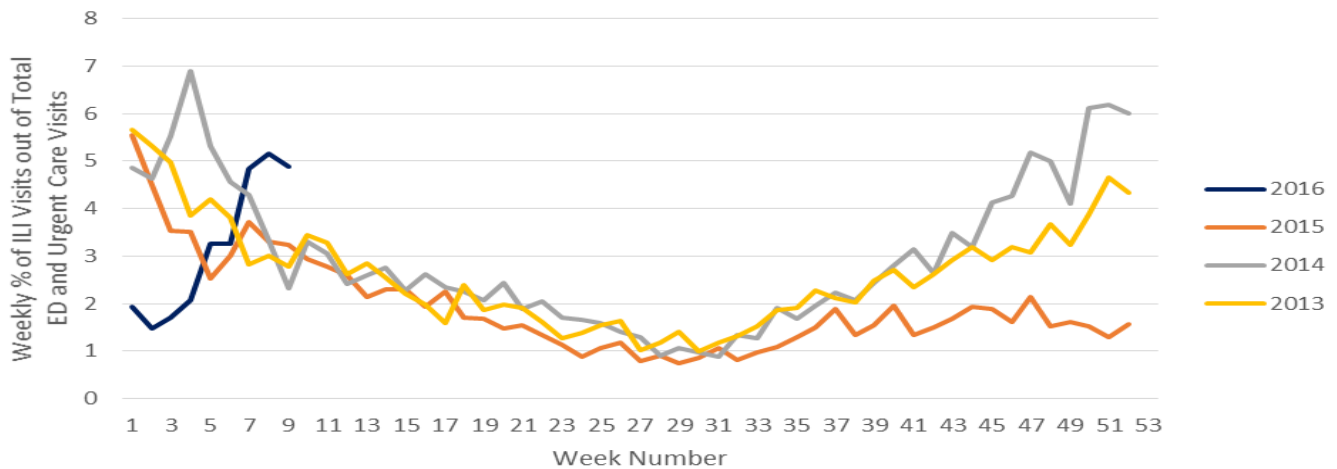
Local: Seminole County is reporting **MODERATE** flu activity for the month of January. One **influenza outbreak** was reported in Seminole for the 2015-2016 flu season in a childcare facility. The ESSENCE Syndromic Surveillance system is showing **increasing** influenza-like illness (ILI) chief complaints.

State: Florida is currently reporting **Sporadic** flu activity. Influenza activity has remained relatively stable but has increased slightly in recent weeks. Eighteen **influenza or ILI outbreaks** have been reported this flu season. The predominantly circulating strain identified in Florida so far this season is Influenza A 2009(H1N1). Four influenza-associated pediatric deaths have been reported so far in the 2015-16 influenza season.

National: **Increasing** levels of flu activity are being reported nationwide. The predominantly circulating strain identified nationally so far this season is Influenza A 2009(H1N1).

Additional information can be found at the following link: <http://emergency.cdc.gov/han/han00374.asp>

ESSENCE Influenza-Like Illness Chief Complaints
Seminole County, FL
2013 - 2016



Seminole County Mosquito-borne Illness Statistics 2016 Year to Date:

West Nile Virus: 0

Eastern Equine Encephalitis: 0

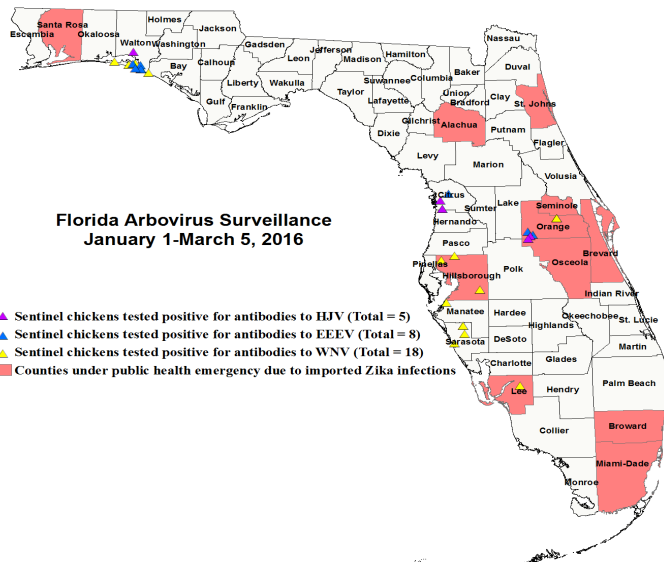
St. Louis Encephalitis: 0

Dengue: 2

Chikungunya: 0

Malaria: 0

Zika Virus: 1

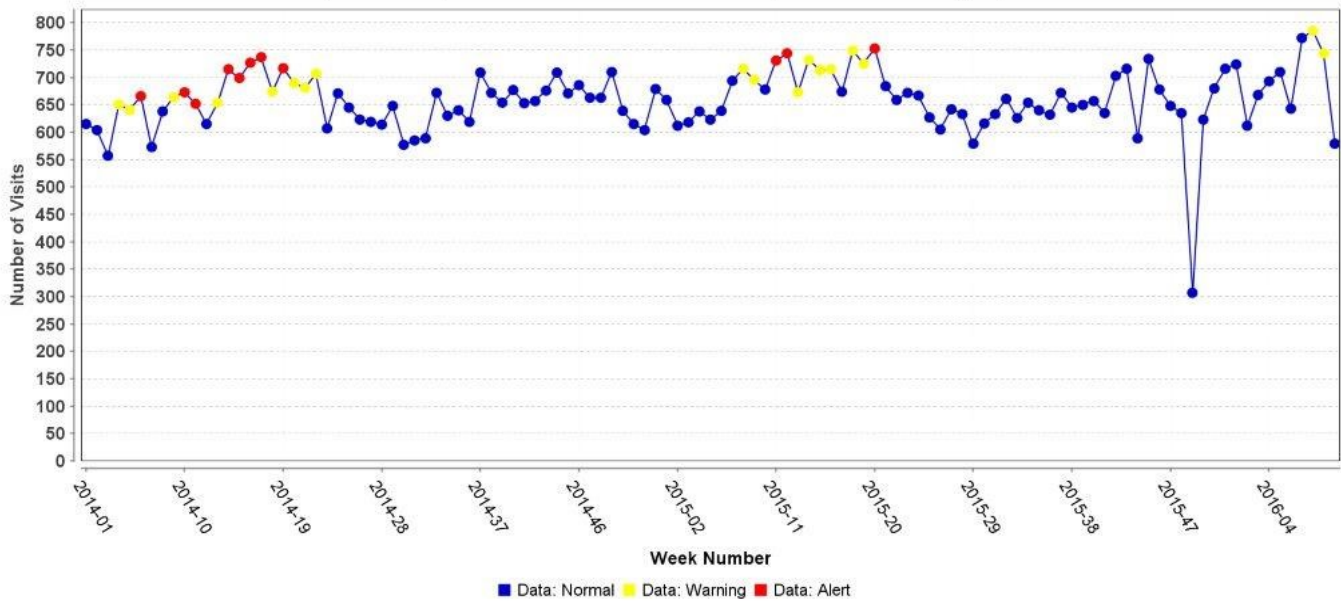


Gastrointestinal Illness Surveillance

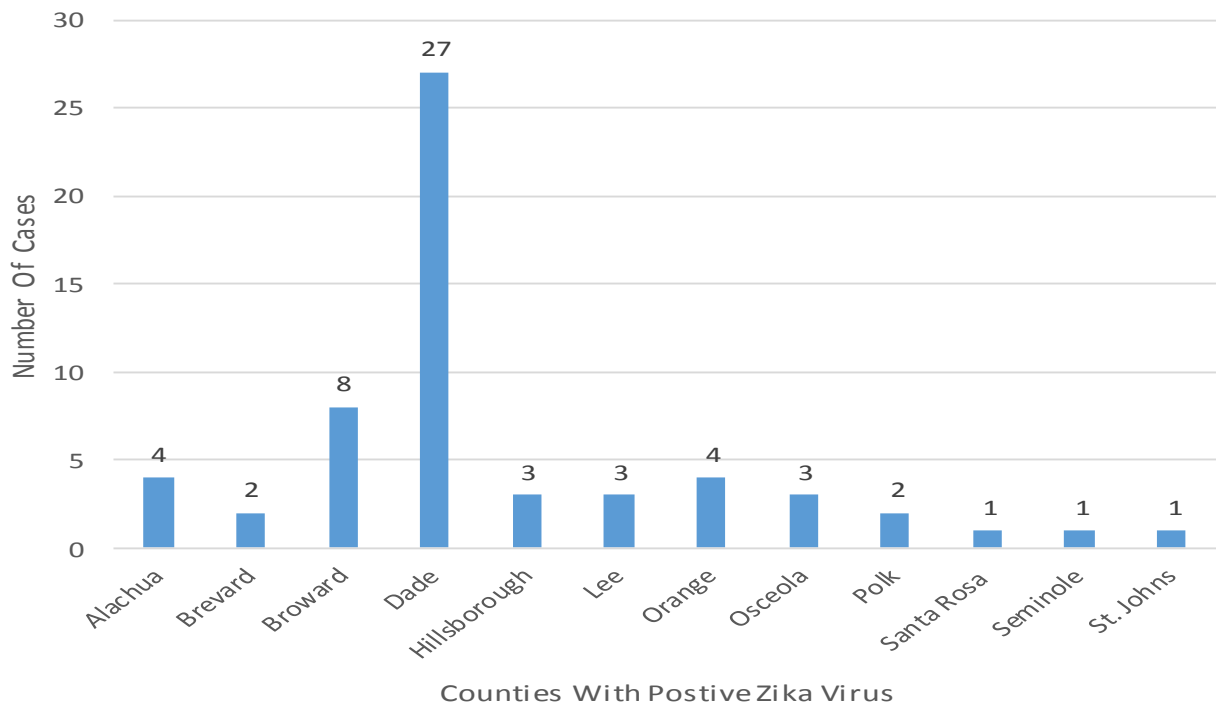
Gastrointestinal Illness typically follows a trend similar to influenza season, peaking in the winter months. There have been no gastrointestinal illness outbreaks investigated by DOH-Seminole in February.

Food and Waterborne Illness Complaints can be submitted at the following link. A health department employee will follow-up with the complainant by phone: <http://www.floridahealth.gov/diseases-and-conditions/food-and-waterborne-disease/online-food-complaint-form.html>

ESSENCE, Chief Complaints of Gastrointestinal Illness, Seminole County, FL, 2014 - 2016



State Of Florida Zika Virus Cases March 2016



Disease Incidence Table-Seminole County

Selected Diseases/Conditions Reported to DOH-Seminole	2016 through Week 10	2015 through Week 10	2014 through Week 10	2013–2016 Average through Week 10
Animal Bite to Humans**	10	3	4	5.0
Animal Rabies	0	2	1	1.3
Campylobacteriosis	10	10	3	7.0
Chlamydia	137	110	99	116.3
Cryptosporidiosis	0	4	1	1.3
Cyclosporiasis	0	0	0	0.0
Dengue	2	1	0	0.8
E. coli Shiga toxin-producing	1	0	2	1.3
Giardiasis	3	4	1	2.5
Gonorrhea	28	32	25	25.8
Haemophilus influenzae (invasive)	0	0	0	1.0
Hepatitis A	0	0	0	0.0
Hepatitis B (acute and chronic)	21	13	7	12.3
Hepatitis C (acute and chronic)	111	78	66	76.5
Hepatitis B in Pregnant Women	0	0	0	0.0
HIV*	0	5	4	3.3
Lead poisoning	0	1	1	0.5
Legionellosis	1	3	0	1.5
Lyme Disease	0	0	0	0.0
Meningococcal Disease	0	0	0	0.0
Pertussis	1	0	3	1.8
Salmonellosis	5	10	8	7.3
Shigellosis	0	4	0	1.3
S. pneumoniae – drug resistant	1	3	2	2.0
Syphilis	1	12	6	5.5
Tuberculosis	0	0	0	0.0
Varicella	3	5	4	4.5

- * HIV data includes those cases that have converted to AIDS. These HIV cases cannot be added with AIDS cases to get combined totals since the categories are not mutually exclusive.
- ** Animal bite to humans by a potentially rabid animal resulting in a county health department or state health office recommendation for post-exposure prophylaxis (PEP), or a bite by a non-human primate.

Reported cases of diseases/conditions in **Bold** are >10% higher than the previous three year average for the same time period.

All Data is Provisional

Seminole Shining Star Performers of the Month



DOH-Seminole's Epidemiology Program would like to thank the following healthcare providers for their diligence in timely reporting from Florida's list of reportable diseases/conditions.



Natalie Afanador



Sandy Flinn



Marcea Sevcech

Seminole Shining Star Performer(s) of the month show a positive attitude toward work responsibilities, co-workers, clients, and serve as a role model for others. DOH-Seminole's Epidemiology Program would like to provide monthly recognition to public health professionals whose efforts protect the community from disease, promote healthy behaviors, and improve the quality of life in Seminole County.

The purpose of the award is to:

- Recognize Seminole County public health partner's excellence in the community
- Reward partners who show exemplary contribution, performance in their jobs, and other related duties beyond their own offices
- Acknowledge those that continuously report diseases and conditions from Florida's reportable diseases /conditions in a timely manner

Starting this month, Seminole County will be recognizing DOH-Seminole public health partners that provide stellar work. Please nominate your colleagues to show your appreciation for **going above and beyond**. Nominations can be emailed to Tania.Slade@flhealth.gov or Kenyatta.Badgett@flhealth.gov.



Disease Reporting

The Epidemiology Program conducts disease surveillance and investigates suspected occurrences of infectious diseases and conditions reported from physician's offices, hospitals and laboratories.

Surveillance is primarily conducted through passive reporting from the medical community as required by Chapter 381, Florida Statutes.

To report a reportable disease or outbreak during business hours please use the [Report of Communicable Disease Form](#). Contact the Division of Epidemiology at 407-665-3266 for diseases other than HIV/AIDS and STDs.

To report an urgent reportable disease or outbreak after hours, call 407-665-3266 and follow the instructions to reach the on-call Epidemiologist.

[Reportable Diseases/Conditions in Florida - Practitioner List](#)

[Reportable Diseases/Conditions in Florida - Laboratory List](#)

[Disease Reporting Information for Health Care Providers and Laboratories](#)

Foodborne Illnesses Reporting Links:

[Report illnesses due to food online 24/7](#)

[Report unsafe or unsanitary conditions](#)

Disaster Preparedness Link: <http://www.floridadisaster.org/index.asp>

MISSION

To protect, promote and improve the health of all people in Florida through integrated state, county and community efforts

VISION

To be the Healthiest State in the Nation

VALUES

Innovation
Collaboration
Accountability
Responsiveness
Excellence

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