



# Epidemiology Monthly Surveillance Report

Florida Department of Health in Orange County

## Primary Amebic Meningoencephalitis (PAM) Advisory

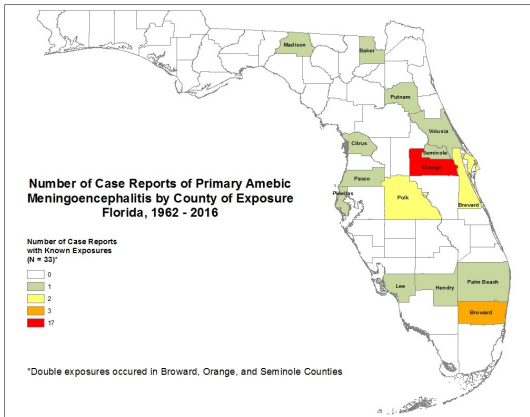
As the warmer summer months and outdoor swimming season draw near, the Florida Department of Health in Orange County (DOH-Orange) advises clinicians to be on alert for cases of Primary Amebic Meningoencephalitis (PAM) caused by *Naegleria fowleri*. A freshwater ameba, *Naegleria fowleri* can be found in lakes, rivers, hot springs, warm water discharge from industrial plants, under-chlorinated swimming pools, water heaters, and soil. Infection occurs when the ameba enters the nose via a contaminated water source, travels to the brain, and destroys brain tissue.

There have been 138 reported cases of PAM with exposures in the U.S. from 1962 through 2015, with the majority reported in southern states. The preliminary case count for the U.S. for 2016 is 5 cases, which includes one [successful treatment case in Florida](#). Since 1962, in Florida, there have been 33 cases with known single exposure locations in the state, including the case in 2016.

The most recent fatal case in Central Florida was in 2014, a Florida resident presented with symptoms after [returning from a trip outside of the U.S., where the exposure occurred](#).

In recent years, exposures have also occurred from contaminated tap water used in neti pots and also during ritual nasal ablation. Four northern states have also had cases.

Early symptoms of PAM are similar to those of bacterial meningitis and may include headache, fever, nausea, or vomiting. Symptoms present 1 to 9 days after infection, with a median of 5 days. Later symptoms may consist of neck stiffness, lethargy, confusion or disorientation, photophobia, seizures, and hallucinations. PAM progresses rapidly and with a high case fatality rate, typically causing death within 5 days following presentation of symptoms. However, since 1962, there have been 4 documented survivors in the US.



**Successful** outcomes **are possible**. **Early recognition and diagnosis is of utmost importance for case management and improved prognosis. DOH-Orange advises clinicians to obtain history of exposure to freshwater for all patients with early symptoms of PAM.** In most cases, the ameba can be visualized in CSF under direct microscopy.

*Naegleria fowleri* is found worldwide. Cases have occurred with exposure in one location and patient presentation in a different state or country, further underscoring the importance of history.

Upon suspicion of PAM infection, clinicians should contact the Centers for Disease Control and Prevention (CDC) immediately at 770-488-7100. CDC provides diagnostic support and consultation, 24/7, including coordination of miltefosine shipment for treatment. Miltefosine has shown promise as treatment for PAM when used in addition to a regimen of other antibiotics, antifungals, and therapeutic hypothermia.

PAM is a reportable disease in Florida. Please report all suspected cases to DOH-Orange Epidemiology Program (407-858-1420) within one business day.

[FL DOH Primary Amebic Meningoencephalitis \(PAM\)](#)

[CDC PAM Treatment](#)

[CDC PAM Information for Public Health & Medical Professionals](#)

May 2017

Volume 8, Issue 5

### Points of Interest:

- PAM Advisory
- Canine Influenza

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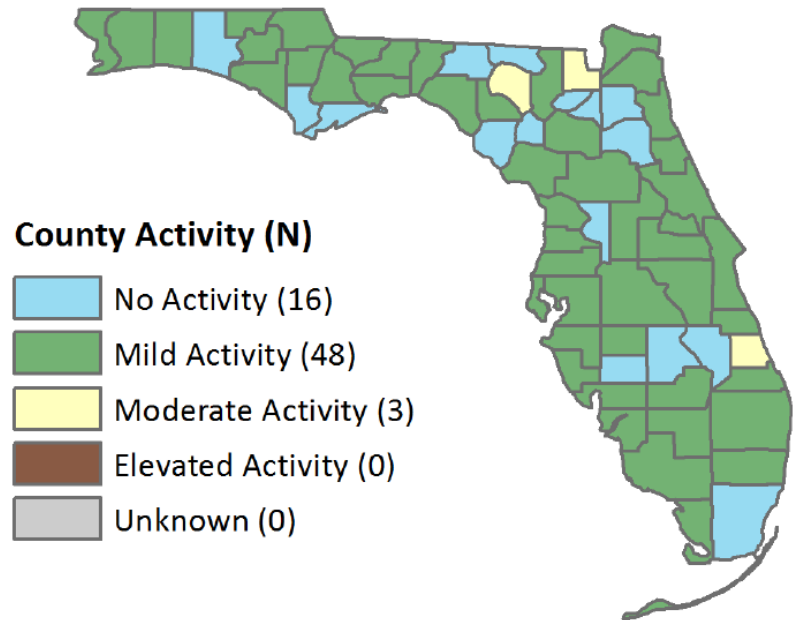
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# Influenza Surveillance (data from [Florida Flu Review](#))

## Florida

- ⇒ In week 20, Florida reported sporadic influenza activity to the Centers for Disease Control and Prevention (CDC).
- ⇒ In week 20, influenza activity in Florida decreased as well as the percent of ILI emergency department and urgent care center visits.
- ⇒ No influenza-associated pediatric deaths were reported in week 20.

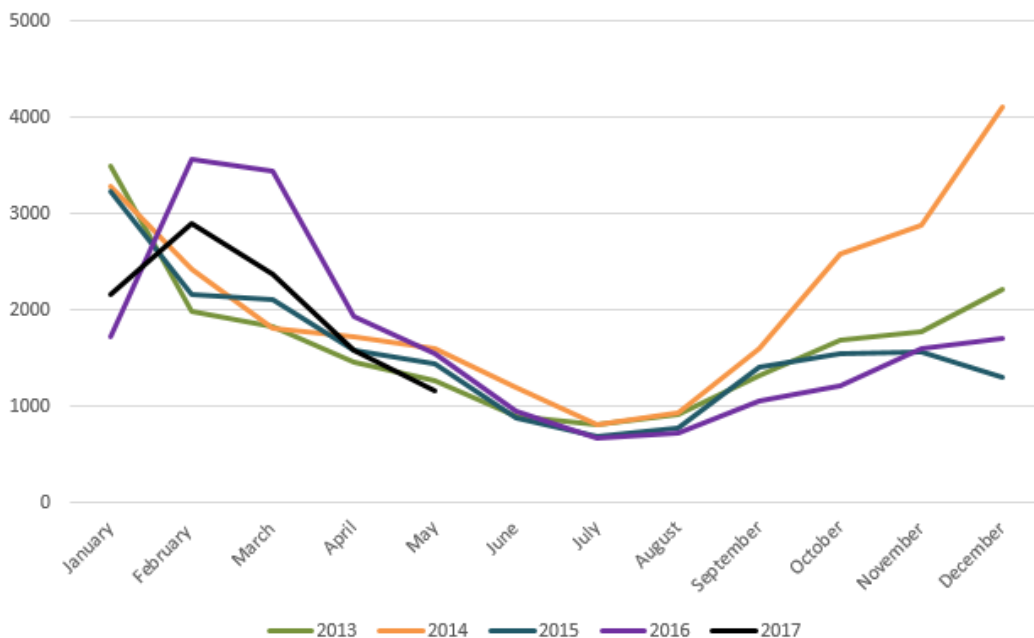
### Influenza Activity Level, by county for Week 20, 2017



## Orange County

- ⇒ Orange County influenza activity level for week 20 has decreased.
- ⇒ No influenza outbreaks are currently being investigated in Orange County.

### Influenza-like Illness from Emergency Department Visits in Orange County, 2013 to 2017



## Influenza Resources:

- [Florida Department of Health Influenza](#)
- [Center for Disease Control and Prevention Weekly Influenza Activity Report](#)

## Zika Virus Surveillance

### National

- ⇒ The CDC has issued travel recommendations concerning the Zika virus. Travel recommendations can be viewed [here](#).
- ⇒ Differences in case counts can be attributed to surveillance reporting time lags between agencies.

### Florida

- ⇒ **On June 2, the CDC removed the cautionary area designation for Miami-Dade County after more than 45 days since the last confirmed local case.**
- ⇒ There are no longer travel recommendations related to Zika virus for Miami-Dade County, Florida. However, the level of risk for Zika virus transmission after a yellow area is removed remains unknown. Sporadic cases may still occur, therefore individuals should continue to protect themselves by following CDC recommendations.
- ⇒ The best method of prevention is to avoid mosquito bites and to reduce mosquito breeding sites.

### Orange County

- ⇒ No local transmission of Zika has been identified in Orange County.
- ⇒ Pregnant women (with or without exposure) can get tested for free at three Health Department locations in Orange County (Tues-Thurs 9:00AM-1:30PM).
  - Lila Mitchell Clinic: 5151 Raleigh St. Suite B
  - Southside: 6101 Lake Ellenor Dr.
  - Eastside: 12050 E. Colonial Dr. Building A  
Testing referrals will be given on a walk-in basis only.

### Clinician Guidance

Clinicians who suspect a patient has a Zika virus infection should:

- 1) Test also for dengue and chikungunya viruses due to similar geographic spread of diseases and clinical presentation;
- 2) Contact their local county health department to report the disease upon suspicion. The local health department will be able to provide consultation for laboratory testing recommendations. Local health department contact information is available [here](#).

### Laboratory-confirmed symptomatic Zika virus disease cases

Top 3 States	Total Case Count
Florida	1139
New York	1028
California	447

*As of May 25, 2017*

### Travel-Related Zika Cases in FL by County

County	Case Count 2016	Case Count 2017
Miami-Dade	350	21
Broward	182	12
Orange	167	3
Palm Beach	65	3
Hillsborough	46	3
Osceola	38	0
Polk	31	1
Seminole	28	0
Collier	28	2
Pinellas	25	0
Brevard	17	0

*As of June 07, 2017*

## Zika Virus Resources:

[Florida Department of Health](#)

[Orange County Mosquito Control](#)

[Centers for Disease Control and Prevention](#)

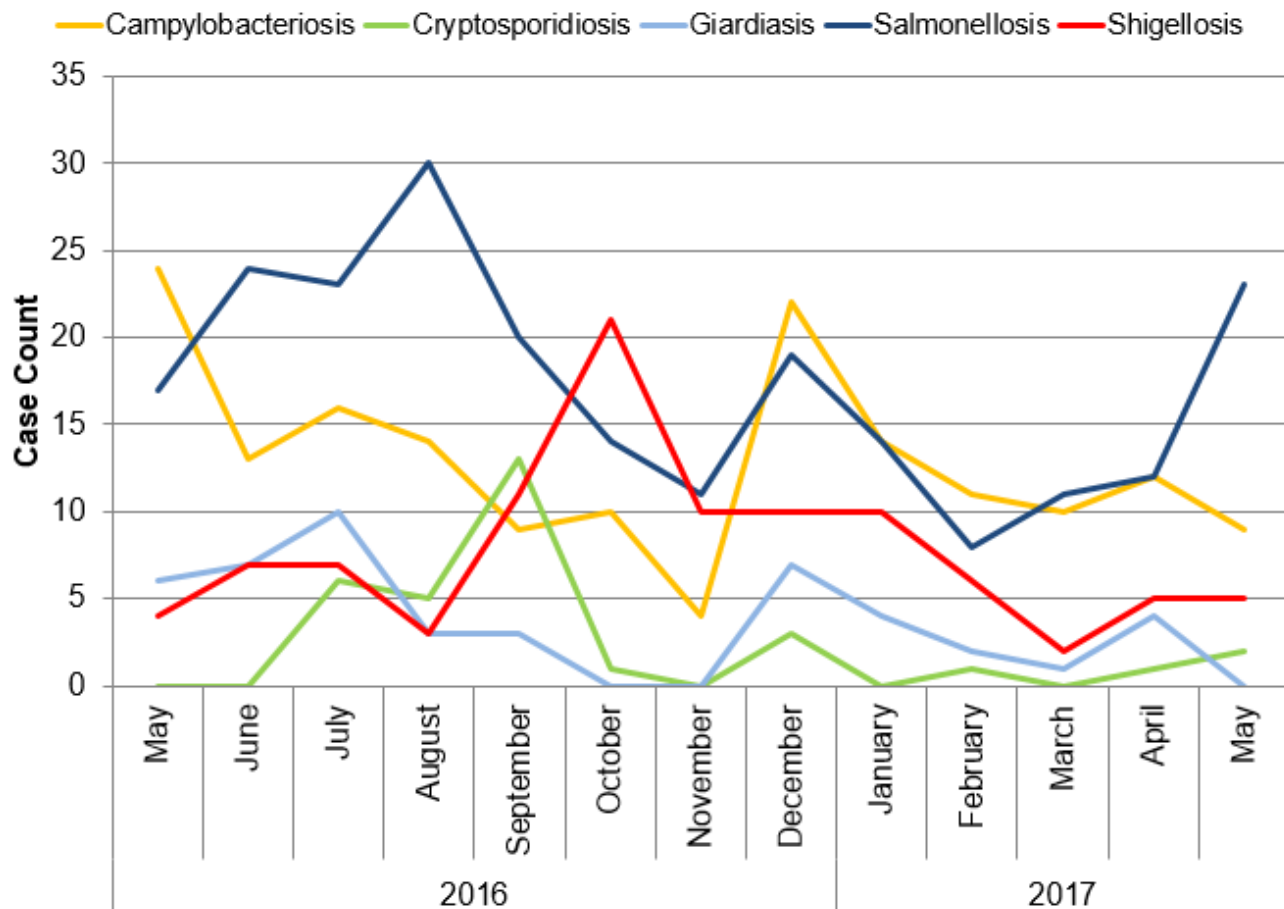
[Latest Travel Notices](#)

[CDC Healthcare Guidance](#)

[Local Health Department Contact Information](#)

## Gastrointestinal Illness Surveillance

Select Reportable Enteric Diseases in Orange County, Florida, May 2016 to May 2017



### Gastrointestinal Illness Points of Interest:

- ⇒ Enteric reportable disease cases remain within seasonally expected levels.
- ⇒ 2 GI illness outbreaks were reported to Orange County during May.
- ⇒ In May, there were 20 foodborne illness complaints reported to Orange County.

### Gastrointestinal Illness Resources:

[Florida Online Foodborne Illness Complaint Form - Public Use](#)

[Florida Food and Waterborne Disease Program](#)

[Florida Food Recall Searchable Database](#)

[Florida Department of Health - Norovirus Resources](#)

[CDC: A-Z Index for Foodborne Illness](#)    [CDC: Healthy Water](#)

**REPORT  
FOODBORNE  
ILLNESS  
ONLINE**

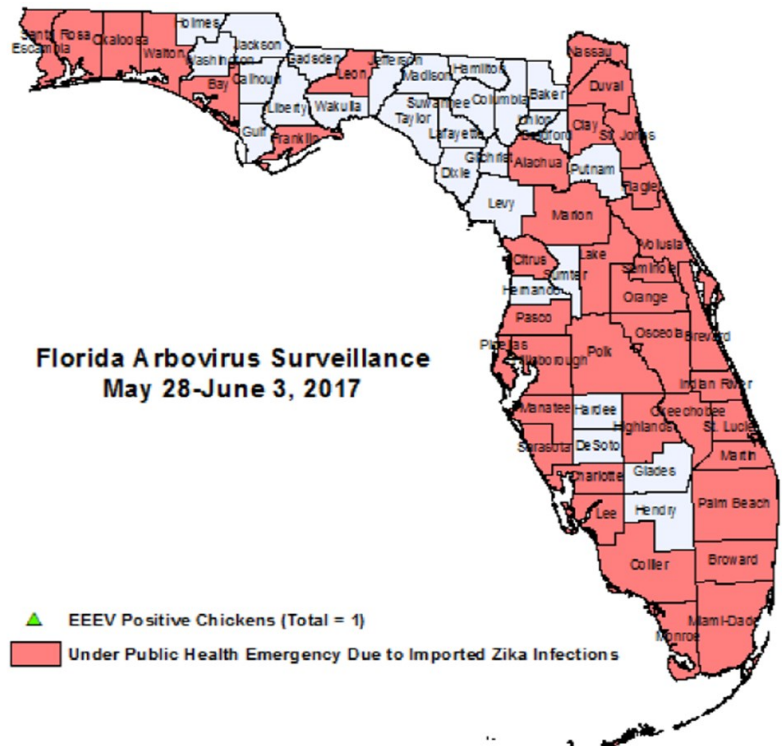
## Arboviral Surveillance

### Florida

- ⇒ Three travel-associated case of dengue have been reported in 2017. One travel-associated case of chikungunya was reported in 2017. No human cases of West Nile virus (WNV) have been reported.
- ⇒ No counties are currently under a mosquito-borne illness advisory or alert.

### National

- ⇒ There is a CDC Level 2 (Alert) Travel Health Notice for multiple countries in the Caribbean, Central and South America, Mexico, Cape Verde, Southeast Asia, and Pacific Islands related to Zika and poor pregnancy outcomes.
- ⇒ There is a CDC Level 2 Travel Health Notice for Brazil related to the transmission of Yellow Fever virus.
- ⇒ There is a CDC Level 1 (Watch) Travel Health Notice for multiple countries in the Caribbean, Central and South America, and Mexico, related to the transmission of chikungunya virus.



### Orange County

- ⇒ No locally acquired cases of Zika virus, West Nile virus, dengue virus, chikungunya virus, St. Louis encephalitis virus, or Eastern equine encephalitis virus have been identified in Orange County in 2017.
- ⇒ Two travel-related cases of Zika virus were reported in May 2017. In total, there are 3 travel-related cases of Zika virus in 2017.

## Arboviral Resources:

[Weekly Florida Arboviral Activity Report \(Released on Mondays\)](#)

[Orange County Mosquito Control](#)

## Additional Resources:

[Florida Department of Health Mosquito-Borne and Other Insect-Borne Diseases Information](#)

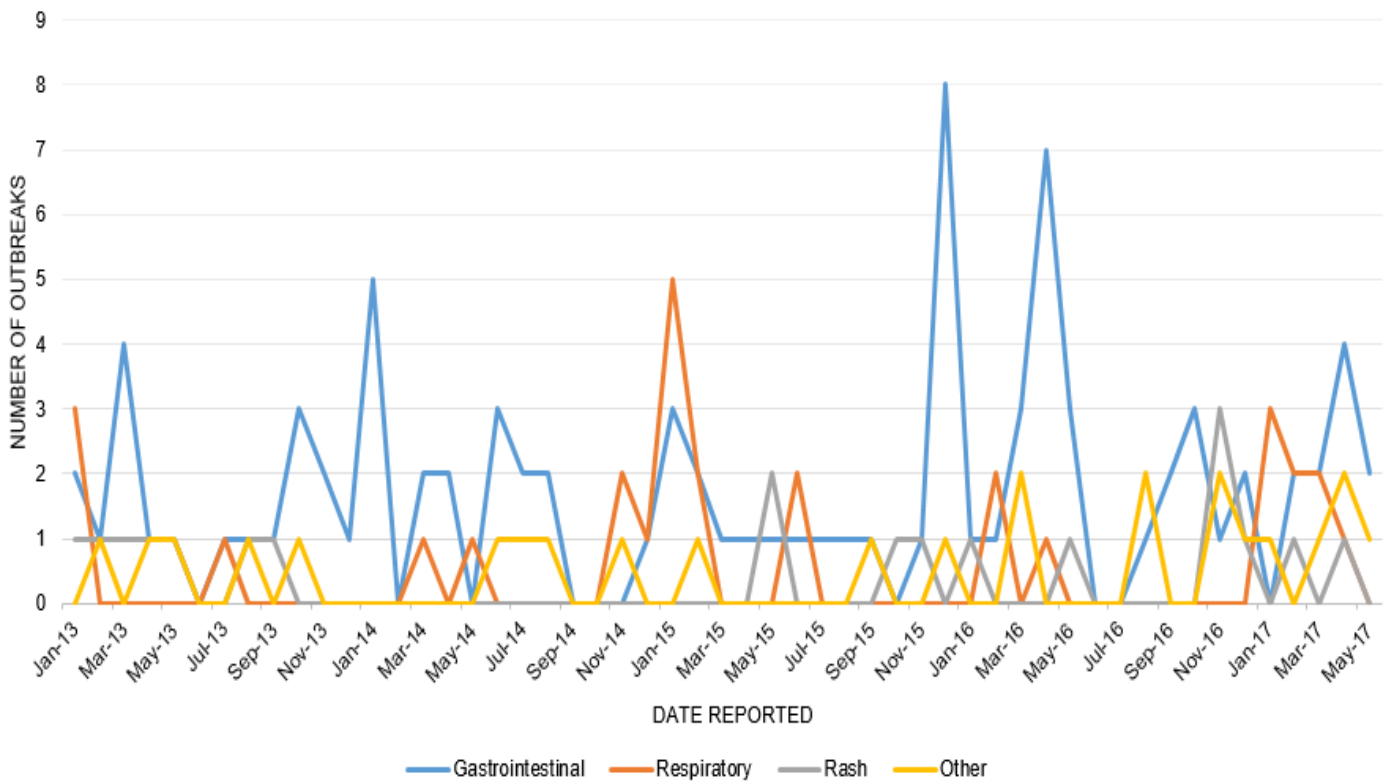
[Florida Department of Health Mosquito-Borne Disease Education Materials](#)

## Outbreaks in Orange County, FL

⇒ In May 2017, there were 2 Gastrointestinal Illness outbreaks reported to Orange County.

- ⇒ One was associated with a local restaurant.
- ⇒ One occurred in a skilled nursing facility.

**Number of Outbreaks Reported in Orange County, FL, by Month from 2013 - 2017**



\*\*\* All Data are Preliminary \*\*\*





Disease	ORANGE				All Counties			
	May		Cumulative (YTD)		May		Cumulative (YTD)	
	2017	Median 5YR	2017	Median 5YR	2017	Median 5YR	2017	Median 5YR
Campylobacteriosis	9	15	69	56	346	282	1644	1254
Carbon Monoxide Poisoning	0	0	1	5	22	12	78	76
Creutzfeldt-Jakob Disease (CJD)	1	0	1	0	1	1	6	9
Cryptosporidiosis	2	2	7	9	31	41	152	192
Escherichia coli: Shiga Toxin-Producing (STEC) Infection	2	1	10	8	40	41	243	174
Giardiasis: Acute	0	5	14	24	61	93	364	423
Haemophilus influenzae Invasive Disease	1	1	9	7	26	21	117	134
Hepatitis A	0	0	5	1	16	10	100	50
Hepatitis B: Acute	0	1	8	6	42	34	248	169
Hepatitis B: Chronic	33	33	194	171	424	403	2283	1923
Hepatitis B: Surface Antigen in Pregnant Women	3	5	26	26	15	39	157	201
Hepatitis C: Acute	1	0	7	3	16	22	104	88
Hepatitis C: Chronic	111	128	580	600	1964	2594	10804	12455
Lead Poisoning	2	2	11	12	74	65	367	433
Legionellosis	2	1	14	6	32	16	177	112
Listeriosis	1	0	1	0	5	3	22	13
Lyme Disease	0	0	4	1	5	7	101	32
Malaria	0	1	2	3	2	8	20	21
Measles (Rubeola)	1	0	1	0	1	0	4	1
Meningitis: Bacterial or Mycotic	0	0	1	1	8	13	39	58
Mercury Poisoning	0	0	1	0	2	0	15	5
Mumps	1	0	1	0	5	2	23	9
Neurotoxic Shellfish Poisoning	0	0	2	0	0	0	2	0
Pertussis	2	2	13	11	22	53	140	228
Q Fever: Acute (Coxiella burnetii)	1	0	1	0	1	0	2	1
Rabies: Possible Exposure	10	8	36	37	215	279	1241	1185
Salmonellosis	26	26	86	83	416	463	1637	1743
Shigellosis	6	6	31	41	93	248	403	872
Strep pneumoniae Invasive Disease: Drug-Resistant	1	1	11	14	19	30	121	241
Strep pneumoniae Invasive Disease: Drug-Susceptible	1	1	13	13	28	34	186	277
Varicella (Chickenpox)	7	3	30	8	61	64	323	368
Vibriosis (Vibrio alginolyticus)	0	0	1	1	5	8	16	20
Zika Virus Disease and Infection- Non-Congenital	2	0	9	0	11	0	101	0
<b>Total</b>	<b>226</b>	<b>242</b>	<b>1200</b>	<b>1147</b>	<b>4009</b>	<b>4886</b>	<b>21240</b>	<b>22767</b>

\*\*\* All Data are Preliminary \*\*\*

## Canine Influenza in Florida

On May 30, 2017, the Florida Department of Agriculture and Consumer Services in coordination with the University of Florida College of Veterinary Medicine reported more than one dozen confirmed cases of H3N2 canine influenza (dog flu) in Florida. Although the H3N2 strain first made its appearance in the United States in 2015, causing canine influenza outbreaks in Chicago and the Midwest, this is the first report of cases in Florida.

Canine influenza is caused by Influenza A virus and dogs infected may develop symptoms such as fever, cough, nasal discharge, anorexia, and lethargy. There is currently no evidence to suggest that canine influenza is transmissible to humans. H3N2 can be prevented through vaccination; dog owners can contact their veterinarian to determine if a dog is at high risk for exposure. In an event that a dog is suspected to have H3N2, it is recommended that dog owners contact their veterinarians in advance to prevent transmission to other canines at the clinic.

### Resources:

<https://vetmed-hospitals.sites.medinfo.ufl.edu/files/2017/05/FDACS-May-30.pdf>


[www.avma.org/KB/Resources/Reference/Pages/Canine-Influenza-Backgrounder.aspx](http://www.avma.org/KB/Resources/Reference/Pages/Canine-Influenza-Backgrounder.aspx)


## Other Disease Resources

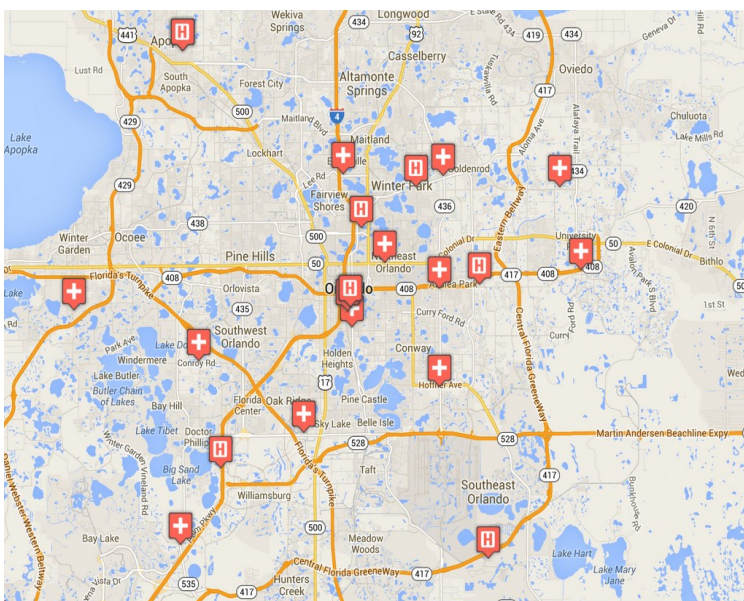
In the structure of DOH-Orange, tuberculosis, sexually transmitted infections, and human immunodeficiency virus are housed in separate programs from the Epidemiology Program. We recognize the importance of these diseases for our community partners and for your convenience have provided links for surveillance information on these diseases in [Florida](#) and [Area 7 HIV & AIDS Program](#) (Brevard, Orange, Osceola, and Seminole Counties).



### Florida Department of Health:

 Hospital linked to ESSENCE

 Florida Hospital Centra Care Clinic linked to ESSENCE



Since 2007, the Florida Department of Health has operated the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE-FL), a state-wide electronic bio-surveillance system. The initial scope of ESSENCE was to aid in rapidly detecting adverse health events in the community based on Emergency Department (ED) chief complaints. In the following years, ESSENCE capabilities have continually evolved to currently allow for rapid data analysis, mapping, and visualization across several data sources, including ED record data, Merlin reportable disease data, Florida Poison Information Network consultations, and Florida Office of Vital Statistics death records. The majority of the information presented in this report comes via ESSENCE. Florida currently has 228 emergency departments and 35 urgent care centers reporting to ESSENCE-FL for a total of 263 facilities.



## Florida Department of Health in Orange County

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### Sign up for Electronic Health Alerts & Epidemiology Monthly Surveillance Reports

Email Contact Information to:

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*The Epidemiology Program conducts disease surveillance and investigates, controls, and prevents infectious diseases and conditions that are reported to DOH-Orange.*

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

*Data are collected and analyzed to track disease trend, and identify outbreaks and unusual occurrences for response and mitigation, to identify targets for prevention and reduction efforts.*

*In cooperation with the Office of Emergency Operations, the Epidemiology Program conducts syndromic and influenza-like-illness surveillance activities. Syndromic surveillance was added to the disease reporting process as an active method of determining activities in the community that could be early indicators of outbreaks and bioterrorism.*

*Our staff ensure that action is taken to prevent infectious disease outbreaks from occurring in Orange County communities and area attractions. Along with many public and private health groups, we work for the prevention of chronic and long-term diseases in Central Florida.*

ALL DATA ARE PROVISIONAL