



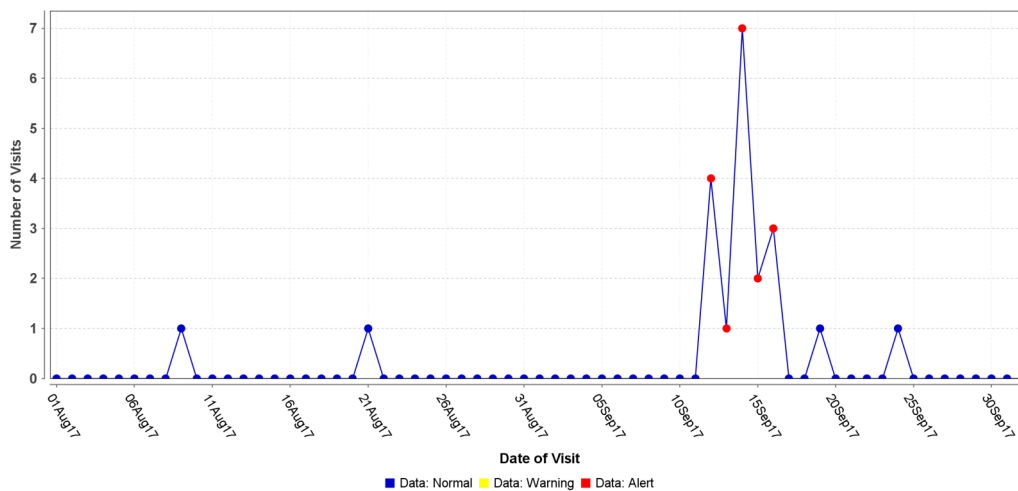
Epidemiology Monthly Surveillance Report

Florida Department of Health in Orange County

Post-Hurricane Carbon Monoxide Poisoning, Enteric Illness, and Vector-Borne Disease Surveillance

When Hurricane Irma reached Orange County in the early hours of September 11th, it caused major flooding and damage to local homes and infrastructure, and left over 200,000 without power in its wake. The aftermath of a hurricane is oftentimes associated with increased risk of acquiring certain illnesses, especially carbon monoxide (CO) poisoning. CO poisoning can cause flu-like symptoms including headache, dizziness, weakness, abdominal discomfort/pain, vomiting, chest pain, and confusion. Inhalation of high CO levels can even lead to death. Improper use of alternative sources of fuel or electricity increases the risk of CO poisoning. Following Hurricane Irma, there was a sharp increase in the number of visits to Emergency Departments and Urgent Care Centers in Orange County for CO poisoning or exposure (Figure 1). The Florida Department of Health in Orange County (DOH-Orange) cautions against the use of generators inside the home or in the garage, or near any open windows. If a clinician suspects CO poisoning, it is important to order appropriate diagnostic testing and initiate treatment as soon as possible, and report the case to DOH-Orange.

Figure 1. Emergency Department and Urgent Care Center Visits with Chief Complaint of CO Poisoning or Exposure, ESSENCE-FL, Orange County, August-October 2017



September 2017

Contents:

Special Interest Articles

Post-Hurricane CO Poisoning, Enteric Illness, and Vector-Borne Disease Surveillance	1
---	---

Multistate Outbreak of Salmonellosis Linked to Imported Papayas	9
---	---

Individual Highlights

Influenza Surveillance	3
--	---

Emerging Disease Surveillance- Zika	4
---	---

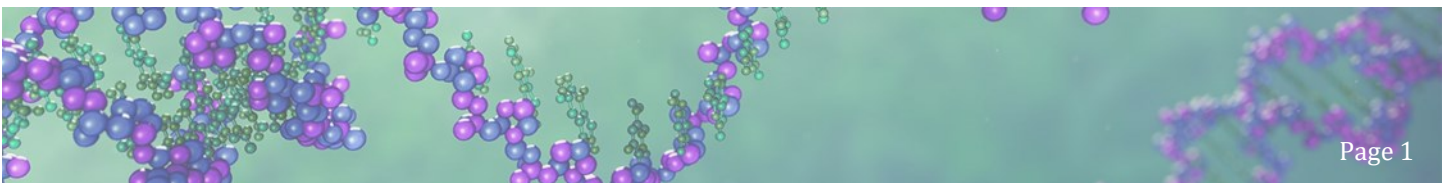
Gastrointestinal Illness Surveillance	5
---	---

Arboviral Surveillance	6
--	---

Outbreaks	7
---------------------------	---

Reportable Diseases Table	8
---	---

Resources	9-10
---------------------------	------



Although an increase in enteric illnesses was not observed, maintaining proper temperatures and storage of foods before and after a hurricane is important to prevent foodborne disease in the event of a power outage. Keep refrigerator and freezer doors closed to extend the shelf life of foods, and if the power goes out discard all perishable food kept in the refrigerator after 4 hours. Items in the freezer will remain safe for consumption for 48 hours if the door is unopened. One way to decide whether to keep or discard food from the freezer is by checking for ice crystals or a temperature of 40 or below, which indicates the food can be refrozen or cooked. In the event of flooding, refrain from eating any food that came into contact with flood water or was damaged. If potable water was compromised, use bottled water that has not been exposed to flood waters, or boil water for one minute to kill potentially harmful organisms.

After Hurricane Irma, Orange County was concerned with the clean-up and safety of residents, including mosquito-borne diseases. Mosquito Control placed traps throughout the county. There was a 550%

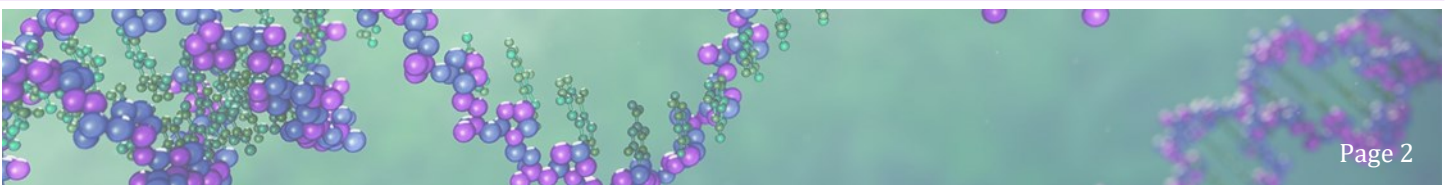
increase in captured mosquitoes within one week, which is attributable to the rain produced by Hurricane Irma. As water levels increase and flooding begins, the number of nuisance mosquitoes increases, since flood waters are their ideal breeding sites. Nuisance mosquitoes generally do not carry disease. As the flooding decreases, excess water can get caught in debris, discarded containers, and rain gutters, which attracts disease-carrying mosquitoes (e.g., *Aedes aegypti*) as their eggs and larvae thrive in small amounts of standing water. Because of this large increase in mosquitoes, Orange County Mosquito Control decided to conduct aerial treatment, in addition to routine ground efforts. Since it cannot easily be determined with the naked eye which mosquitoes are disease-carrying or not, it is important to always take precautionary measures when going outdoors to prevent mosquito bites. This can be done by: wearing mosquito repellent with DEET, wearing long pants and long-sleeved shirts, ensuring windows and doors are screened when open, and eliminating potential mosquito breeding sites by draining and covering any standing water around the house.



Source: Orange County Mosquito Control

Resources:

1. [Carbon Monoxide Poisoning CDC](#)
2. [FDA Food Safety After a Hurricane](#)
3. [Orange County Mosquito Control Update](#)
4. [Mosquito Safety](#)

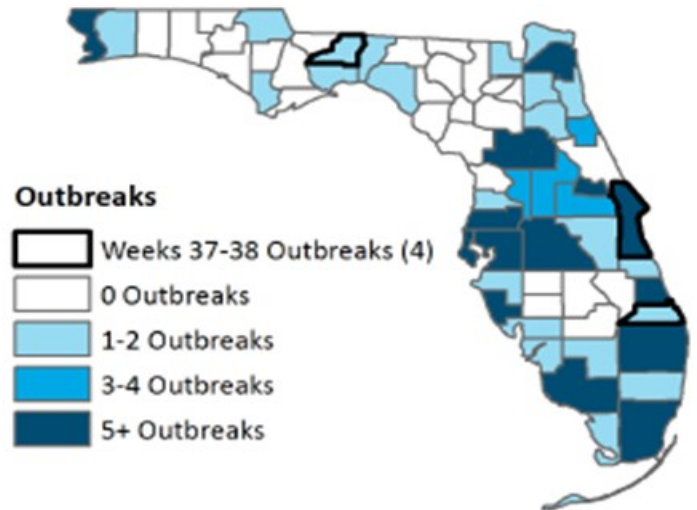


Influenza Surveillance (data from [Florida Flu Review](#))

Florida

- ◆ In weeks 37-38, Influenza and ILI activity decreased, which was below levels observed in previous seasons at this time, likely due to Hurricane Irma.
- ◆ In weeks 37-38, three respiratory outbreaks were investigated: two outbreaks of ILI and one Influenza A.
- ◆ In weeks 37-38, one influenza-associated pediatric death was reported.

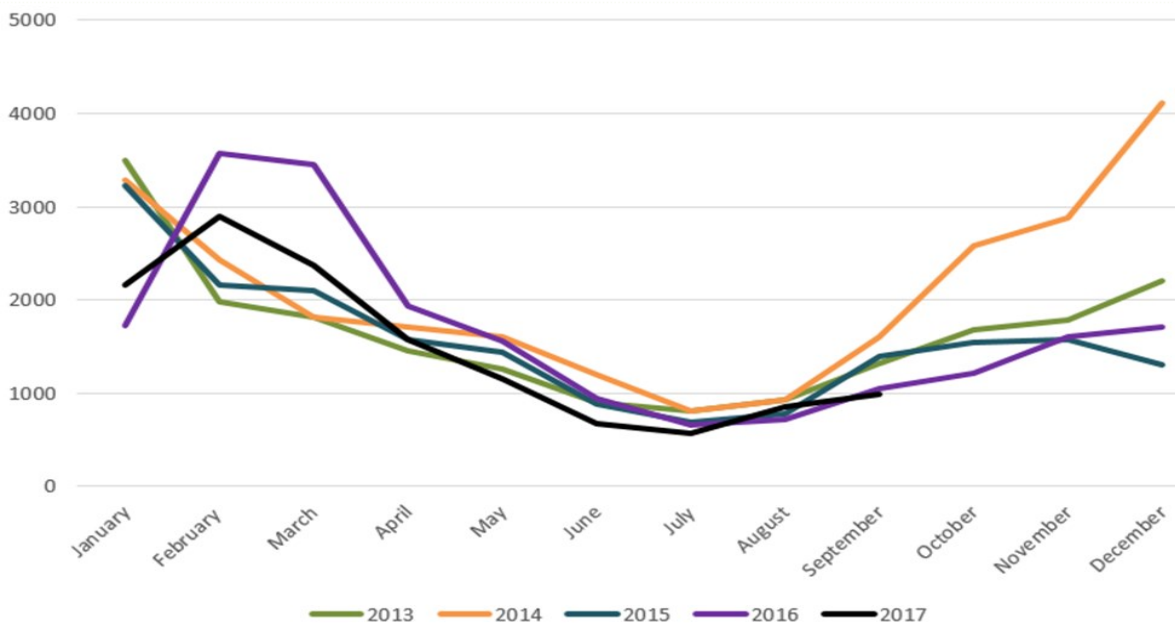
Influenza and ILI Outbreaks by County Week 40, 2016 through Week 38, 2017



Orange County

- ◆ Orange County influenza activity level for weeks 37-38 has increased.
- ◆ There were no reported ILI outbreaks in Orange County for September.

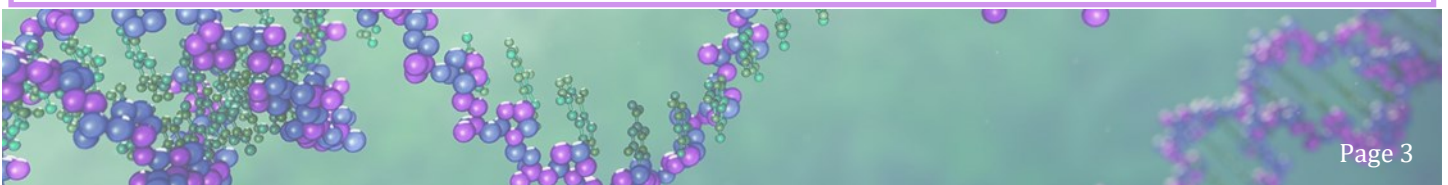
Influenza-like Illness from Emergency Department Visits in Orange County, 2013 to 2017



Influenza Resources:

[Florida Department of Health Influenza](#)

[Center for Disease Control and Prevention Weekly Influenza Activity Report](#)



ZIKA Virus Surveillance

Laboratory-confirmed symptomatic Zika virus disease cases (2015-2017)

Top 3 States	Total Case Count
Florida	1178
New York	1050
California	459

As of September 27, 2017

National

- ◆ CDC travel recommendations regarding Zika virus can be viewed [here](#).
- ◆ Differences in case counts can be attributed to surveillance reporting time lags between agencies.
- ◆ **On August 29, 2017, the Zika cautionary area designation for Brownsville, Texas was lifted. There are no longer travel recommendations related to Zika virus for Brownsville, TX.**

Florida

- ◆ The **first** case of local transmission was reported in Manatee County, Florida after travel to the Caribbean. This case is still under investigation.
- ◆ There is no evidence of ongoing, active transmission in the state.

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.)

Travel-Related Zika Cases in FL by County

County	Case Count 2016	Case Count 2017
Miami-Dade	350	69
Broward	182	23
Orange	167	14
Palm Beach	65	7
Hillsborough	46	8
Osceola	38	0
Polk	31	2
Seminole	28	4
Collier	28	5
Pinellas	25	2
Brevard	17	0

As of October 3, 2017

Clinician Guidance/Updates

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

- ◆ Test for dengue and chikungunya viruses also due to similar geographic spread of diseases and clinical presentation
- ◆ 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](#).

Zika Virus Resources:

[Florida Department of Health](#)

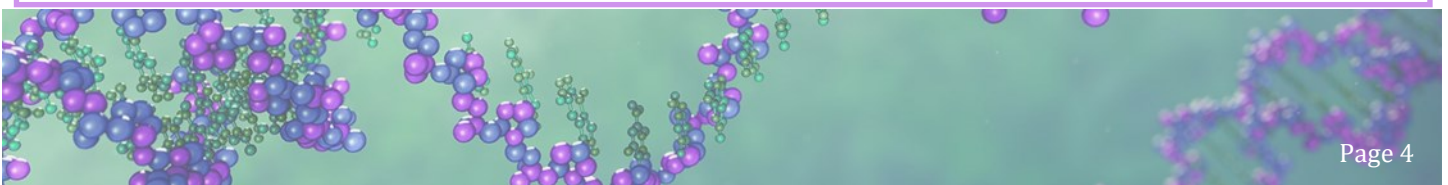
[Latest Travel Notices](#)

[Orange County Mosquito Control](#)

[CDC Healthcare Guidance](#)

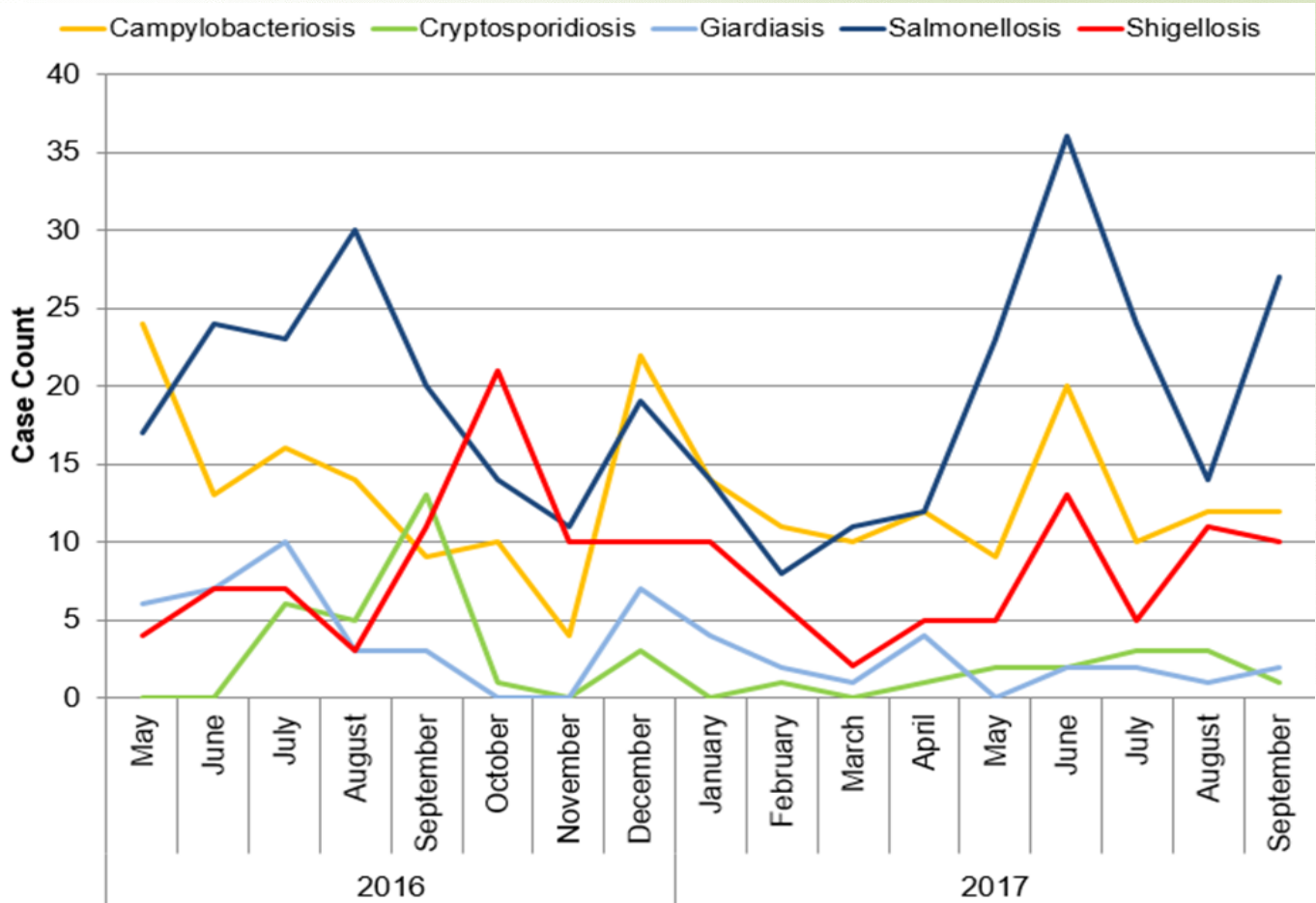
[Centers for Disease Control and Prevention](#)

[Local Health Department Contact Information](#)



Gastrointestinal Illness Surveillance

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



Gastrointestinal Illness Points of Interest:

- Enteric reportable disease cases remain within seasonally expected levels.
- In September, 10 foodborne illness complaints were investigated by Orange County.

**REPORT
FOODBORNE
ILLNESS ONLINE**

Gastrointestinal Illness Resources:

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

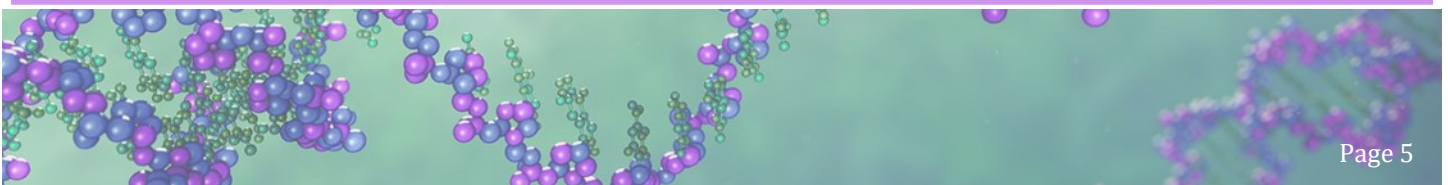
[CDC: Healthy Water](#)

[Florida Food and Waterborne Disease Program](#)

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

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

[Florida Food Recall Searchable Database](#)



Arboviral Surveillance

National

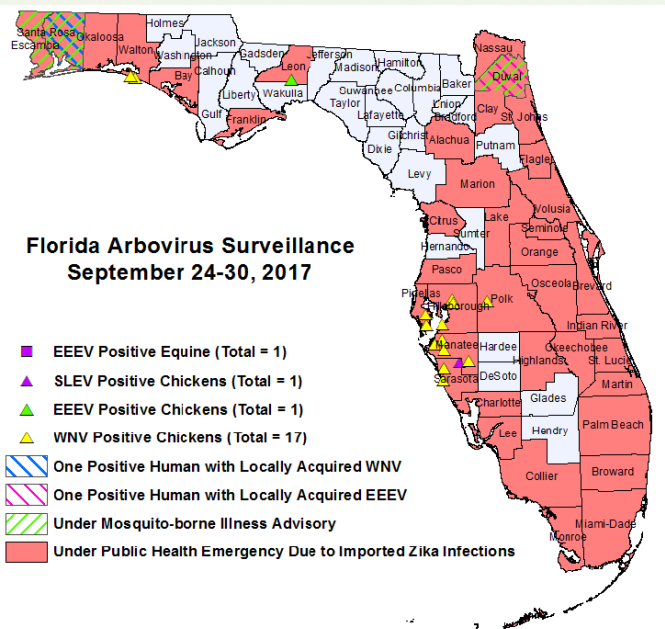
- There are no longer travel recommendations related to Zika virus for Brownsville, TX

International

- 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 Brazil and Mexico, related to the transmission of chikungunya virus.
- There is a CDC Level 1 Travel Health Notice for Sri Lanka and Vietnam related to the transmission of dengue virus.

Florida

- Nine travel-associated cases of dengue have been reported in 2017. One travel-associated case of chikungunya was reported in 2017.
- One asymptomatic blood donor was identified as West Nile virus (WNV) positive in Escambia County in August. In September, one human case of WNV illness acquired in Florida has been reported in 2017 in Santa Rosa County.
- **Duval, Escambia, and Santa Rosa counties are currently under a mosquito-borne illness advisory.**



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.
- No travel-related cases of Zika virus were reported in September 2017. In total, there are 14 travel-related cases of Zika virus in 2017.

Arboviral Resources:

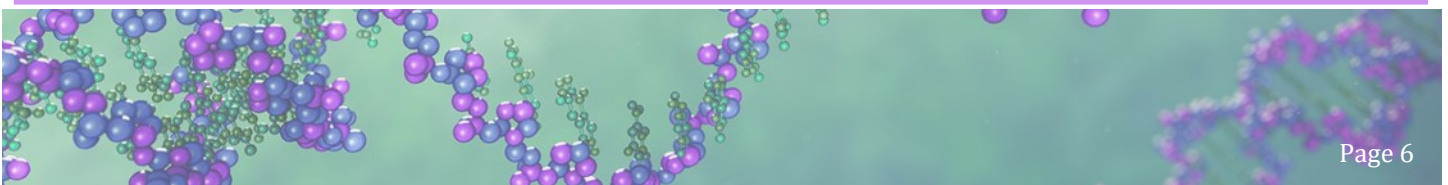
[Weekly Florida Arboviral Activity Report \(Released on Mondays\)](#)

[Orange County Mosquito Control](#)

Additional Resources:

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

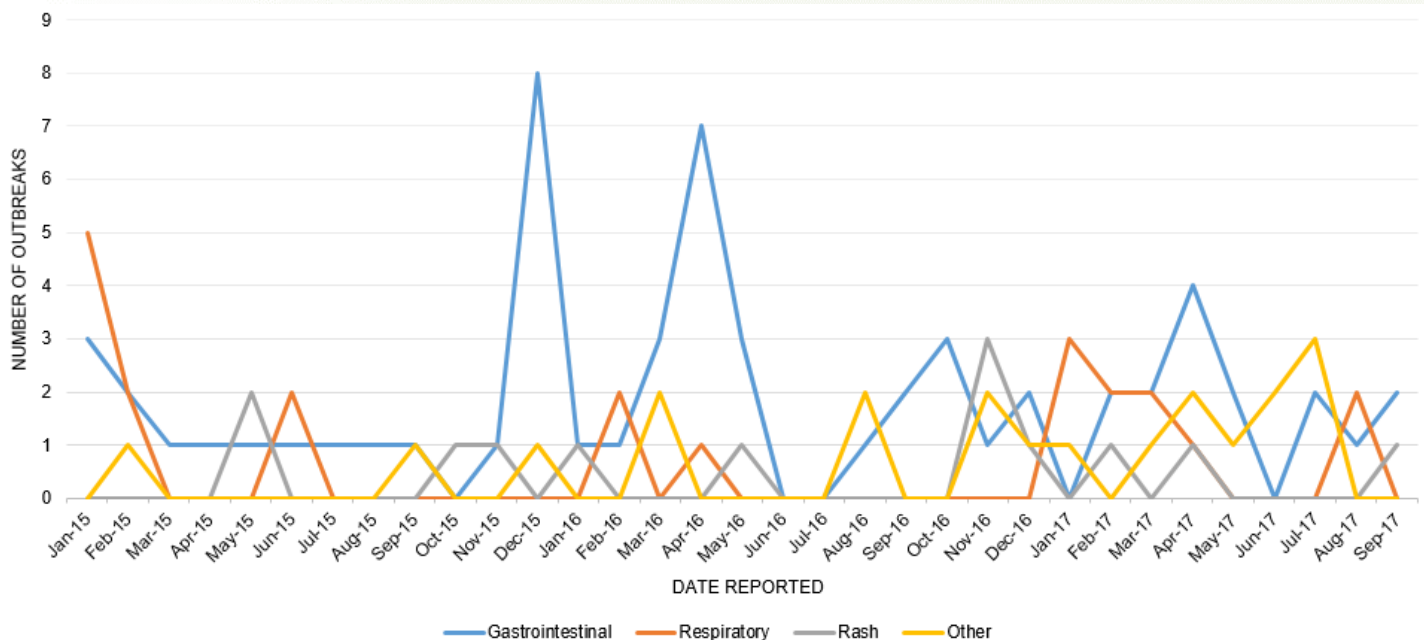
[Florida Department of Health Mosquito-Borne Disease Education Materials](#)



Outbreaks in Orange County

- In September 2017, two Gastrointestinal Illness outbreaks were investigated.
 - One was suspected to have an association with a local restaurant that was reported to Orange County.
 - One was associated with an independent living community.
- One scabies outbreak at a skilled nursing facility was investigated.

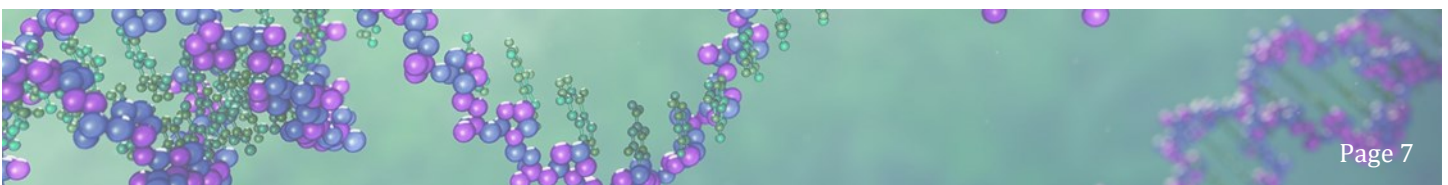
Number of Outbreaks Reported in Orange County, FL, by Month from 2015-2017



*** All Data are Preliminary ***



Reminder: Outbreaks of any disease, any case, cluster of cases, or exposure to an infectious or non-infectious disease, condition, or agent found in the general community or any define setting (e.g., hospital, school, or other institution) not listed that is of urgent public health significance should be reported.



Disease	ORANGE				All Counties			
	September		Cumulative (YTD)		September		Cumulative (YTD)	
	2017	Median 5YR	2017	Median 5YR	2017	Median 5YR	2017	Median 5YR
Campylobacteriosis	15	11	155	96	306	237	3390	2398
Carbon Monoxide Poisoning	2	1	13	8	368	23	517	140
Creutzfeldt-Jakob Disease (CJD)	0	0	1	1	1	3	20	19
Cryptosporidiosis	2	7	23	34	65	96	398	435
Cyclosporiasis	0	0	4	2	4	2	112	33
Escherichia coli: Shiga Toxin-Producing (STEC) Infection	6	1	26	14	31	42	506	379
Giardiasis: Acute	6	7	41	53	80	111	785	840
Haemophilus influenzae Invasive Disease	1	0	13	12	25	16	227	214
Hemolytic Uremic Syndrome (HUS)	0	0	1	0	0	0	9	4
Hepatitis A	1	1	10	3	26	11	225	95
Hepatitis B: Acute	2	2	28	9	54	42	573	299
Hepatitis B: Chronic	37	34	337	321	334	371	3954	3736
Hepatitis B: Surface Antigen in Pregnant Women	1	3	49	45	16	35	345	375
Hepatitis C: Acute	3	1	18	6	25	20	285	150
Hepatitis C: Chronic	136	121	1102	1101	2022	2427	19340	22375
Lead Poisoning	1	2	15	20	68	63	815	681
Legionellosis	3	3	32	17	59	29	393	237
Listeriosis	0	0	2	1	4	4	44	29
Lyme Disease	0	1	6	4	17	22	238	141
Malaria	0	1	2	6	5	6	54	54
Measles (Rubeola)	0	0	1	0	0	0	4	5
Meningitis: Bacterial or Mycotic	0	0	1	2	6	9	87	107
Meningococcal Disease	1	0	2	0	2	3	20	36
Mercury Poisoning	0	0	1	0	4	0	30	10
Mumps	0	0	4	0	4	3	76	17
Neurotoxic Shellfish Poisoning	0	0	2	0	0	0	2	0
Pertussis	3	0	22	28	20	30	299	454
Q Fever: Acute (Coxiella burnetii)	0	0	1	0	0	0	2	2
Rabies: Possible Exposure	5	7	58	70	196	239	2483	2284
Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis	0	0	1	0	5	1	43	13
Salmonellosis	37	47	228	222	720	864	4580	4564
Shigellosis	17	10	90	60	101	140	1016	1514
Strep pneumoniae Invasive Disease: Drug-Resistant	2	0	15	16	21	16	195	338
Strep pneumoniae Invasive Disease: Drug-Susceptible	2	1	17	17	27	19	276	352
Typhoid Fever (Salmonella Serotype Typhi)	0	0	2	1	6	1	41	9
Varicella (Chickenpox)	4	1	43	16	41	63	502	597
Vibriosis (Vibrio alginolyticus)	1	0	5	2	8	7	59	47
Vibriosis (Vibrio parahaemolyticus)	0	0	1	1	2	4	37	34
Vibriosis (Vibrio vulnificus)	0	0	1	0	15	5	39	30
Viral Hemorrhagic Fever - Expired 1/4/2015	0	0	0	0	0	0	0	0
Zika Virus Disease and Infection- Non-Congenital	0	0	20	0	15	0	242	0
Total	288	262	2393	2188	4704	4964	42267	43048

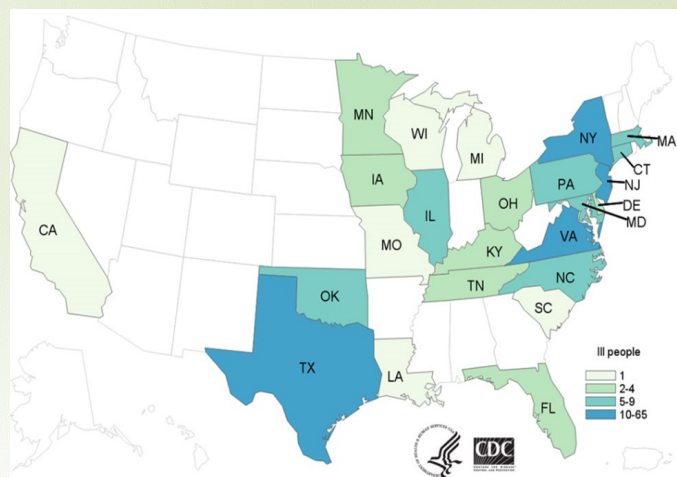
*** All Data are Preliminary ***



Multistate Outbreak of Salmonellosis linked to Imported Maradol Papayas

A total of four separate outbreaks linked to imported Maradol papayas from Mexico are being investigated by the CDC, public health and regulatory officials, and the U.S. Food and Drug Administration. One outbreak involving 210 cases as of September 11, 2017, from 24 states including Florida, is associated with strains of *Salmonella* Thompson (135), *Salmonella* Kiambu (59), *Salmonella* Agona (10), and *Salmonella* Gaminara (6) (Figure 1.). Epidemiologic investigation and laboratory evidence points to Maradol papayas from Carica de Campeche farm in Mexico as the likely source of the outbreak. The CDC recommends to avoid consumption and the sale of Maradol papayas from this farm in addition to El Zapotanito farm in La Huerta, Mexico, Rancho El Ganadero farm in Mexico, and Bravo Produce Inc. of San Ysidro, California as the other three outbreaks are linked to these sources as well. The investigations are ongoing and the FDA continues to test papayas from Mexico for *Salmonella*.

Figure 1. People infected with the outbreak strains of *Salmonella*, by state of residence, as of September 11, 2017 (n=210)



Resources: [CDC Salmonella Outbreaks](#)

Other Disease Resources

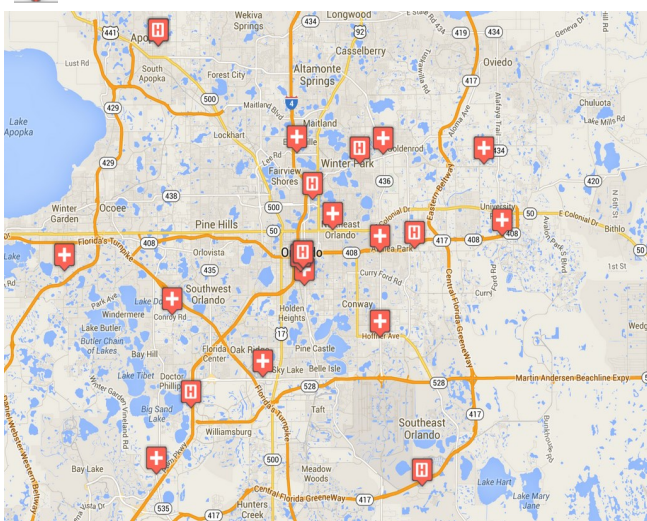
In the structure of DOH-Orange, tuberculosis, sexually transmitted infections, and human immunodeficiency virus are housed in separate programs from the Epidemiology Program. We recognize the importance of these diseases for our community partners and for your convenience have provided links for surveillance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



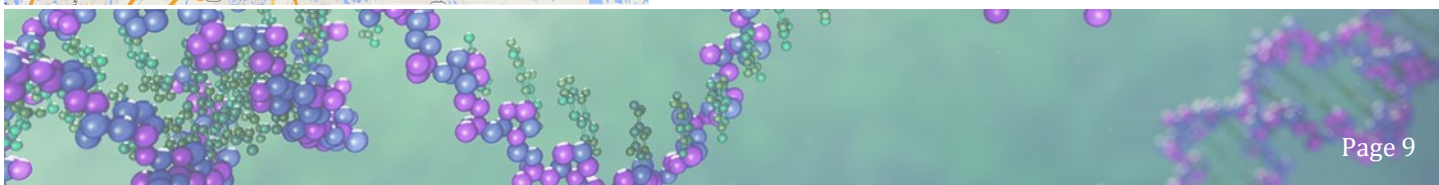
Florida Department of Health: ESSENCE

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

Epidemiology Program
6101 Lake Ellenor Drive
Orlando, Florida 32809

Phone: 407-858-1420
Fax: 407-858-5517
<http://orange.floridahealth.gov/>

Sign up for Electronic Health Alerts & Epidemiology

Monthly Surveillance Reports

Email Contact Information to:

CHD48.EPIRegistration@flhealth.gov



Issue Contributors:

Alvina Chu, MHS

Epidemiology Program Manager

Ashley Vineyard, MPH

Epidemiologist

Kathy Abusager, MPH

Epidemiologist

Taylor Campion, MPH

Epidemiologist

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

