



Epidemiology Monthly Surveillance Report

Florida Department of Health in Orange County

Primary Amebic Meningoencephalitis Advisory

Summer is officially here and our lakes, rivers, springs, and other freshwater bodies are once again crowded by the public seeking to cool down and have fun. *Naegleria fowleri*, commonly referred to as the “brain-eating ameba”, is a free-living ameba that is naturally and commonly found in bodies of warm freshwater and soil. The ameba can also occur in inadequately chlorinated swimming pool water, water heaters, and contaminated tap water.

Primary amebic meningoencephalitis (PAM) is caused when *Naegleria fowleri* enter the body through the nose during water activities. The amoebae then travel across the nasal mucosa and make their way to the brain via the olfactory nerves, causing PAM. The amoebae are most common during the summer months of July, August, and September. You cannot get infected from swallowing water contaminated with *Naegleria* nor are the amoebae spread from person to person, causing PAM.

In the United States there have been 143 PAM infections from 1962 through 2016 with only four survivors. Infections primarily occur in the 15 southern states, with half of the infections occurring in Texas and Florida. Thirty-four cases have been documented in Florida. This includes 33 with know single water exposures, and one case in a Florida resident who was exposed outside of the U.S. From those 33 cases, 21 were exposed in Central Florida.

PAM can present between 1 and 9 days post-exposure; the median time to symptom expression is 5 days with early symptoms presenting similar to those of bacterial meningitis. **Freshwater exposure history- within 14 days- is the key!**

Early symptoms

- Headache
- Fever
- Nausea
- Vomiting

Later symptoms

- Neck stiffness
- Lethargy
- Confusion/disorientation
- Photophobia
- Seizures
- Cranial nerve abnormalities

The investigational drug miltefosine has shown promise as treatment for PAM when used in addition to a regimen of antibiotics, antifungals, and therapeutic hypothermia. The last 2 successful outcomes included miltefosine. However, 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. 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.

PAM is a reportable disease in Florida. Please report all suspected cases to the DOH-Orange Epidemiology Program 407-858-1420 immediately upon suspicion. DOH-Orange reminds physicians at the beginning of every summer to be aware of the possibility of PAM when summer arrives each year.

Reference: <https://www.cdc.gov/parasites/naegleria/index.html>

June 2018

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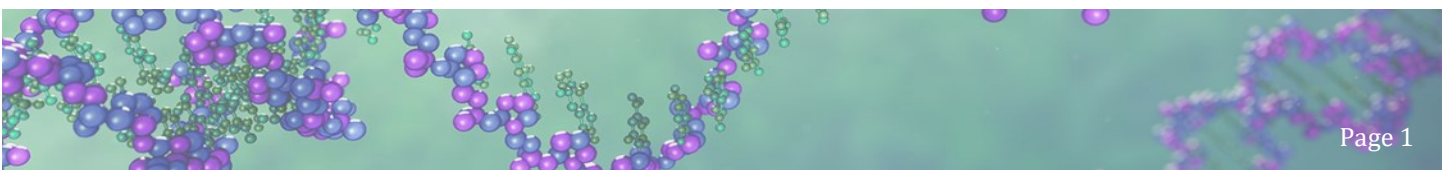
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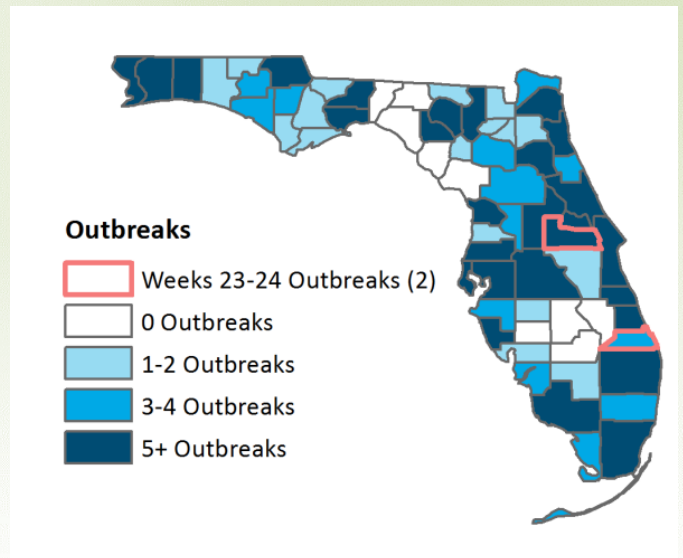


Influenza Surveillance (data from [Florida Flu Review](#))

Florida

Influenza and ILI Outbreaks by County for Week 24, 2018

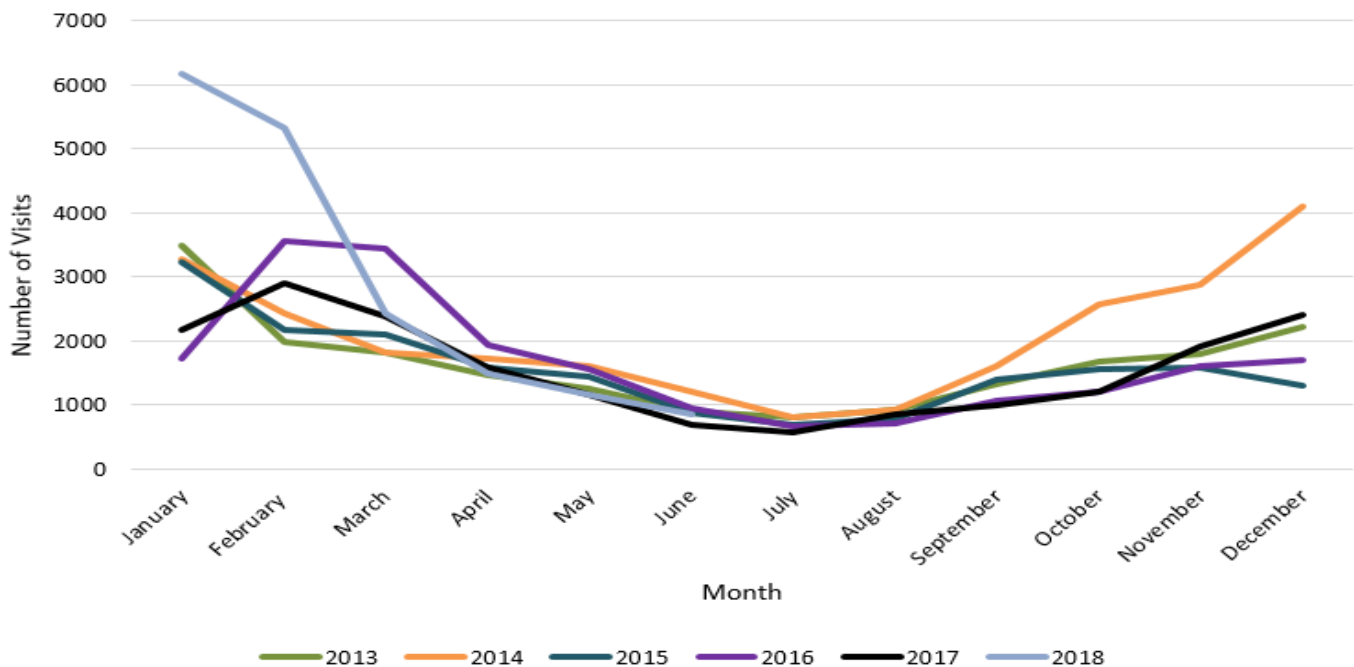
- In week 24, state influenza activity continues to circulate at low levels across the state.
- No new influenza-associated pediatric deaths were confirmed. Eight have been confirmed so far in the 2017-18 influenza season.
- Deaths due to pneumonia and influenza were below expected levels.
(State flu reports are issued biweekly during the summer)



Orange County

- One influenza-like illness outbreak was reported in Orange County in June 2018.
- Orange County influenza activity level for week 24 is decreasing.

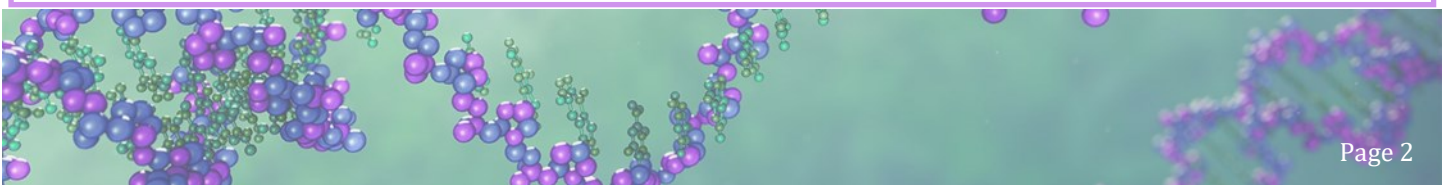
Influenza-like Illness from Emergency Department Visits in Orange County, 2013 to 2018



Influenza Resources:

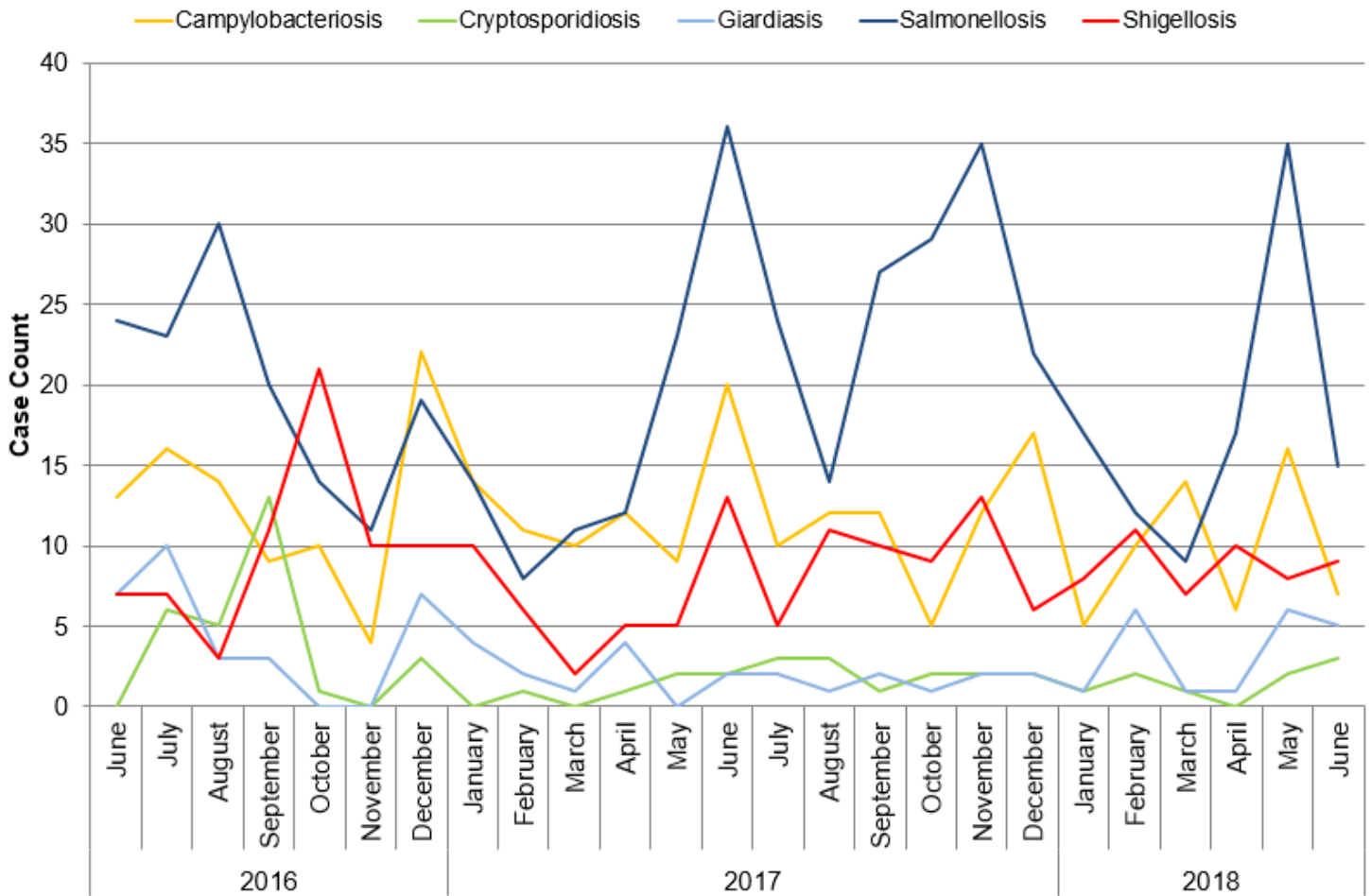
[Florida Department of Health Influenza](#)

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



Gastrointestinal Illness Surveillance

Select Reportable Enteric Diseases in Orange County, Florida, June 2016 to June 2018



Gastrointestinal Illness Points of Interest:

- Enteric reportable disease cases were normal for the month of June. As the summer months approach, we expect the number of enteric illnesses to increase.
- In June, 17 foodborne illness complaints were investigated by Orange County from various sources such as direct reporting, online reporting, social media, Department of Health, and crowd-sourced web-based reporting.

Gastrointestinal Illness Resources:

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

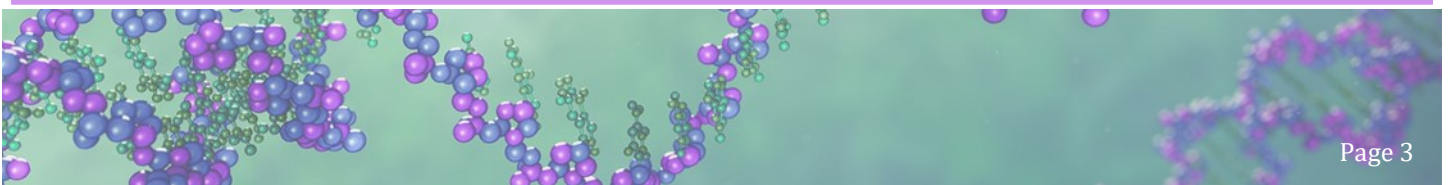
[CDC: Healthy Water](#)

[Florida Food and Waterborne Disease Program](#)

[Florida Food Recall Searchable Database](#)

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

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



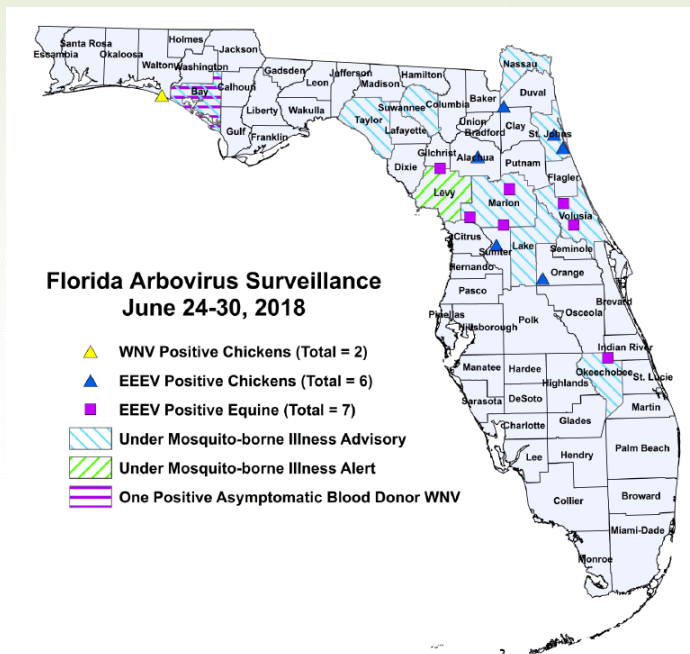
Arboviral Surveillance

International

- There is a Level 2 (Alert) Travel Health Notice from the CDC for multiple countries in the Caribbean, Central and South America, Mexico, Cape Verde, Southeast Asia, and Pacific Islands related to Zika virus transmission and an association with poor pregnancy outcomes. Pregnant women should consider postponing travel to these areas.
- There is also a Level 2 Travel Health Notice for Brazil and a Level 1 Travel Health Notice in Nigeria related to the transmission of yellow fever virus.

Florida

- Three cases of dengue associated with international travel has been reported year to date.
- One case of chikungunya has been reported year to date in a person that had international travel.
- In 2018, positive samples of West Nile virus from one blood donor and thirty sentinel chickens have been reported from seven counties.
- **Bay, Lake, Marion, Nassau, Okeechobee, St. Johns, Suwannee, Taylor, and Volusia counties are currently under a mosquito-borne illness advisory. Levy County is currently under a mosquito-borne illness alert.** No other counties are currently under mosquito-borne illness advisory or alert.



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 2018.
- Nine cases of Zika fever have been reported year to date in individuals with travel history to a country or area experiencing Zika virus activity.
- **We are no longer offering free Zika testing at DOH-Orange for insured pregnant women. Testing for Zika may be ordered through commercial labs. Please notify DOH-Orange of symptomatic patients with a history of travel. Please refer to the following [letter](#) regarding updates on Zika virus testing at BPHL.**

Arboviral Resources:

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

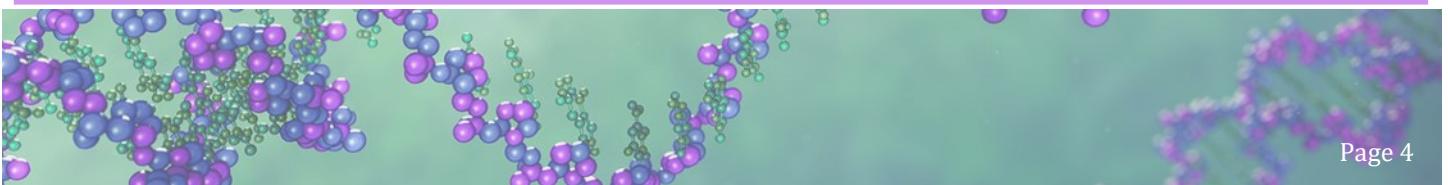
[Orange County Mosquito Control](#)

Additional Resources:

[Florida Department of Health Zika](#)

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

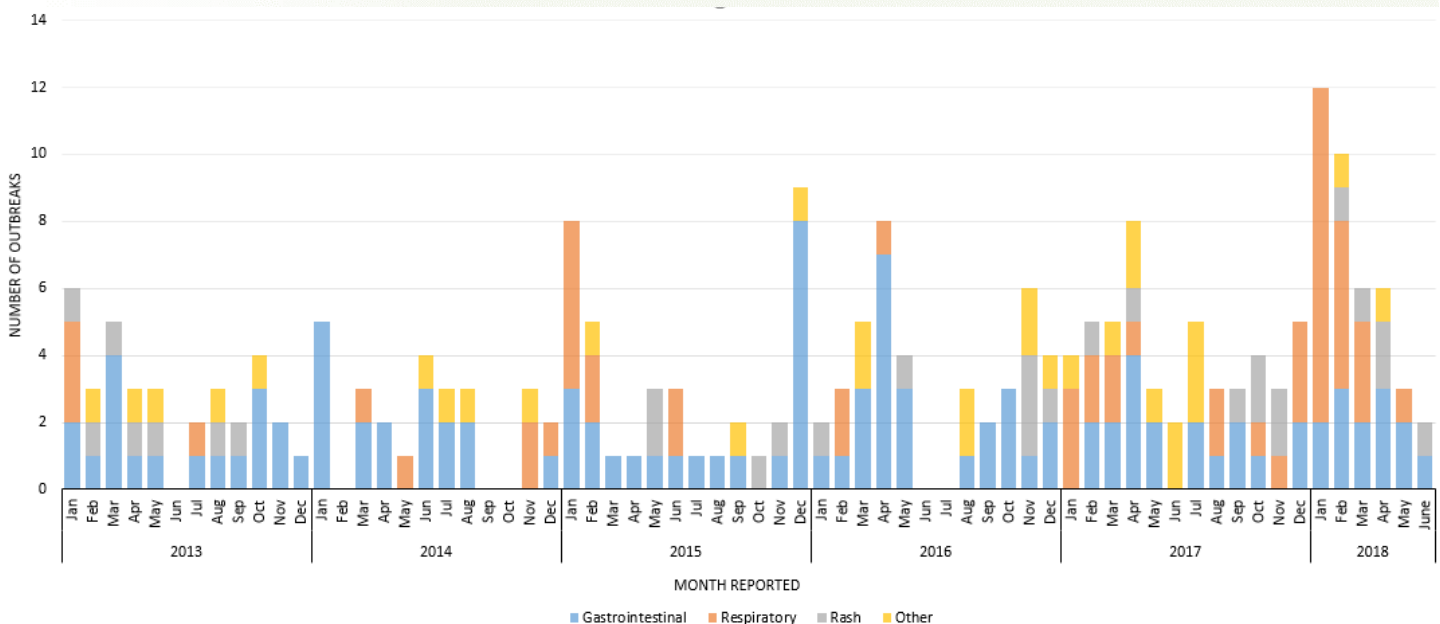
[Florida Department of Health Mosquito-Borne Disease Education Materials](#)



Outbreaks in Orange County

- In June 2018, the following outbreaks were investigated:
 - One gastrointestinal illness outbreak associated with a local restaurant.
 - One hand, foot, and mouth disease outbreak in a pre-school classroom.

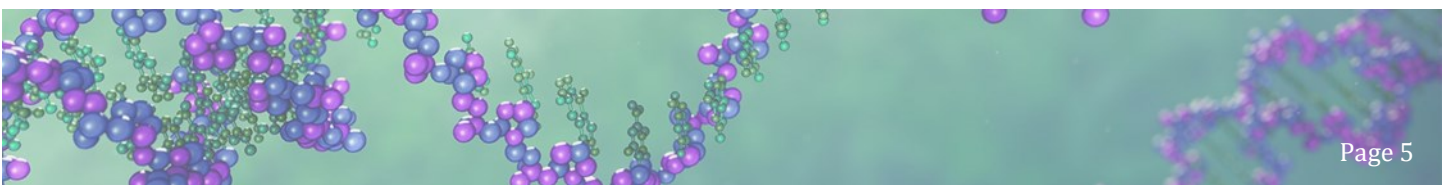
Number of Outbreaks Reported in Orange County, FL, by Month from 2013-2018



*** 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 defined setting (e.g., hospital, school, or other institution) not listed that is of urgent public health significance should be reported.



Disease	ORANGE				All Counties			
	June		Cumulative (YTD)		June		Cumulative (YTD)	
	2018	Median (2013 - 2017)	2018	Median (2013 - 2017)	2018	Median (2013 - 2017)	2018	Median (2013 - 2017)
Amebic Infections (Balamuthia mandrillaris)	0	0	0	0	2	0	3	0
Anaplasmosis - HGA (Anaplasma phagocytophilum)	0	0	0	0	3	1	4	1
Arsenic Poisoning	0	0	0	0	1	1	8	7
Brucellosis	0	0	0	0	0	0	8	3
Campylobacteriosis	15	12	95	66	503	324	2427	1788
Carbon Monoxide Poisoning	0	0	5	6	6	19	115	110
Chikungunya Fever	0	0	1	0	3	0	4	7
Cholera (Vibrio cholerae Type O1)	0	0	0	0	0	0	0	1
Ciguatera Fish Poisoning	0	0	3	0	7	4	39	15
Creutzfeldt-Jakob Disease (CJD)	0	0	0	1	0	2	6	13
Cryptosporidiosis	4	4	14	10	37	34	242	215
Cyclosporiasis	1	0	1	0	12	3	17	4
Dengue Fever	0	0	0	1	1	2	4	36
Eastern Equine Encephalitis Neuroinvasive Disease	0	0	0	0	1	0	1	0
Ehrlichiosis - HME (Ehrlichia chaffeensis)	1	0	1	0	1	5	16	11
Escherichia coli: Shiga Toxin-Producing (STEC) Infection	8	2	26	10	85	55	445	238
Giardiasis: Acute	9	3	30	27	87	93	540	522
Haemophilus influenzae Invasive Disease	2	1	13	10	25	26	207	164
Hansen's Disease (Leprosy)	0	0	0	0	1	2	8	10
Hemolytic Uremic Syndrome (HUS)	0	0	0	0	1	1	2	3
Hepatitis A	5	0	12	2	31	8	112	60
Hepatitis B: Acute	4	2	16	9	70	46	404	244
Hepatitis B: Chronic	35	33	243	227	478	424	2599	2503
Hepatitis B: Perinatal	0	0	0	0	0	0	1	1
Hepatitis B: Surface Antigen in Pregnant Women	4	6	20	34	26	38	192	246
Hepatitis C: Acute	2	0	7	3	21	23	198	125
Hepatitis C: Chronic	196	122	989	734	2184	2457	12839	14869
Hepatitis C: Perinatal	0	0	1	0	0	0	12	0
Hepatitis D	0	0	0	0	1	0	3	1
Hepatitis E	0	0	0	0	1	0	2	3
Influenza-Associated Pediatric Mortality	0	0	0	0	0	0	7	6
Lead Poisoning	37	2	110	13	869	66	3607	417
Legionellosis	5	1	17	8	58	29	316	146
Leptospirosis	0	0	0	0	0	0	2	1
Listeriosis	0	0	1	1	2	2	28	19
Lyme Disease	0	0	3	2	12	13	59	52
Malaria	0	0	1	2	9	7	33	25
Measles (Rubeola)	0	0	0	0	0	0	3	4
Meningitis: Bacterial or Mycotic	0	0	0	1	9	14	57	64
Meningococcal Disease	0	0	1	0	2	2	15	16
Mercury Poisoning	0	0	0	0	5	2	28	11
Mumps	0	0	8	0	11	3	119	13
Paratyphoid Fever (Salmonella Serotypes Paratyphi A B C)	0	0	0	0	0	1	1	4
Pertussis	2	2	7	17	31	41	148	187
Pesticide-Related Illness and Injury: Acute	0	0	0	0	4	3	18	15
Q Fever: Acute (Coxiella burnetii)	0	0	0	0	1	0	1	1
Rabies: Possible Exposure	6	7	40	43	322	313	2053	1661
Ricin Toxin Poisoning	0	0	0	0	0	0	4	0
Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis	0	0	0	0	9	2	22	9
Rubella	0	0	0	0	0	0	0	1
Salmonellosis	33	38	139	121	738	594	2620	2277
Saxitoxin Poisoning (Paralytic Shellfish Poisoning)	0	0	0	0	3	0	3	0
Scombroid Poisoning	0	0	0	0	2	0	5	0
Shigellosis	13	7	64	45	172	179	770	598
Staphylococcus aureus Infection: Intermediate Resistance to Vancomycin (VISA)	0	0	0	0	0	0	2	1
Strep pneumoniae Invasive Disease: Drug-Resistant	1	2	12	11	16	28	173	154
Strep pneumoniae Invasive Disease: Drug-Susceptible	2	0	12	13	31	23	256	279
Tetanus	0	0	0	0	0	0	0	2
Tularemia (Francisella tularensis)	0	0	0	0	1	0	1	0
Typhoid Fever (Salmonella Serotype Typhi)	1	0	7	1	8	1	78	9
Varicella (Chickenpox)	6	1	24	9	76	38	419	381
Vibriosis (Grimontia hollisae)	0	0	0	0	1	0	5	2
Vibriosis (Other Vibrio Species)	1	0	1	0	5	2	23	5
Vibriosis (Vibrio alginolyticus)	0	0	1	1	7	10	28	32
Vibriosis (Vibrio cholerae Type Non-O1)	0	0	0	0	0	1	0	5
Vibriosis (Vibrio fluvialis)	0	0	0	0	2	1	8	4
Vibriosis (Vibrio mimicus)	0	0	0	0	0	0	0	3
Vibriosis (Vibrio parahaemolyticus)	0	0	0	0	12	3	26	22
Vibriosis (Vibrio vulnificus)	0	0	0	0	7	3	12	9
West Nile Virus Non-Neuroinvasive Disease	0	0	0	0	1	0	1	0
Zika Virus Disease and Infection- Non-Congenital	0	0	25	0	9	0	111	0
Total	1161	1116	8285	6696	15517	15163	102588	86510

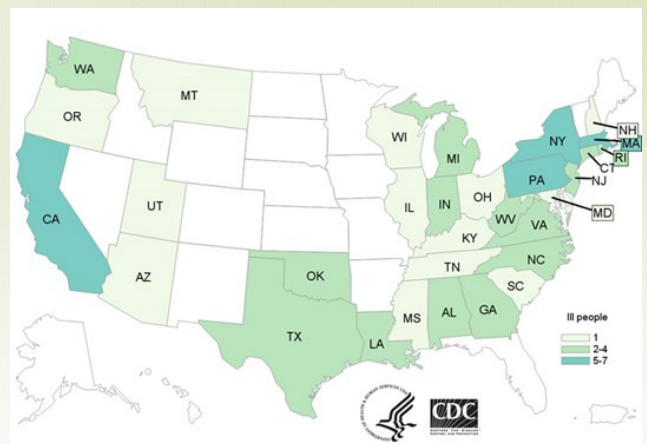
Salmonella Infections Linked to Kellogg's Honey Smacks Cereal

On June 14, 2018, the Centers for Disease Control and Prevention (CDC), public health officials, and the U.S. Food and Drug Administration (FDA) announced that they are investigating a multistate outbreak of Salmonella Mbandaka infections with epidemiologic evidence that Kellogg's Honey Smacks cereal is a likely source of this outbreak. Salmonella infections most often cause diarrhea, fever, and/or abdominal cramps 12 to 72 hours after exposure to the bacteria. As of June 15, 31 states had reported 73 people infected with the outbreak strain. Twenty-four people have been hospitalized and no deaths have been reported. Illness onsets range from March 3, 2018 to May 28, 2018, ages range from less than one to 87, with a median of 58, and 65% are female. To date, Orange County has one case likely associated with this outbreak, not yet reflected in the overall state count.

Public health officials have used PulseNet, the national subtyping network of public health and food regulatory agency laboratories, to identify illnesses that may be part of this outbreak. Pulsed-field gel electrophoresis (PFGE) and whole genome sequencing (WGS) techniques have been used to conduct DNA fingerprinting on Salmonella bacteria isolated from ill people.

CDC recommends people do not eat recalled Kellogg's Honey Smacks cereal of any size package or with any "best if used by" date. Even if some of the cereal has been eaten and no one got sick, throw the rest of it away or return it for a refund. If you store cereal in a container without the packaging and don't remember the brand or type, throw it away. Thoroughly wash the container with warm, soapy water before using it again to remove harmful germs that could contaminate other food.


People infected with the outbreak strain of *Salmonella* Mbandaka, by state of residence, as of June 14, 2018 (n=73)




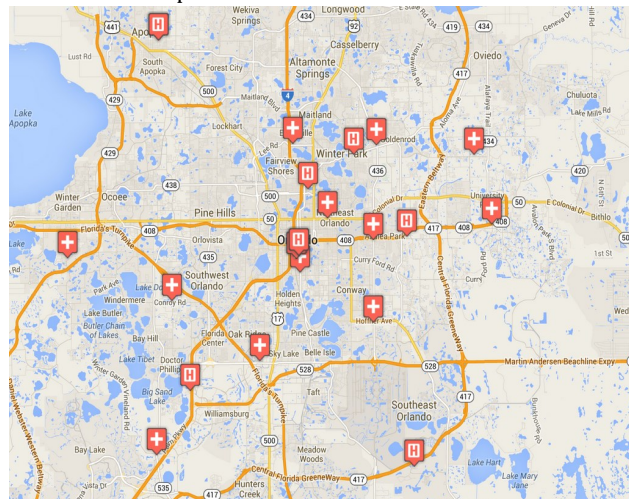
Resources: [CDC Salmonella 2018 Outbreaks](#) [CDC Salmonella Mbandaka Map](#)

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 a link for surveillance information on these diseases in Florida and Area 7 HIV & AIDS Program.

 Hospital linked to ESSENCE

 Florida Hospital Centra Care Clinic linked to ESSENCE

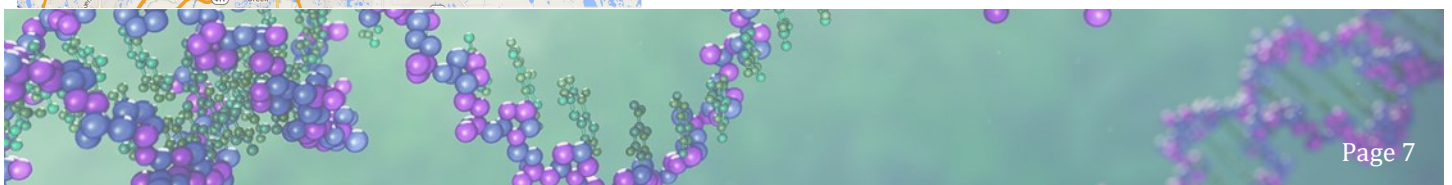


Resources: <http://orange.floridahealth.gov/programs-and-services/index.html>



Florida Department of Health: 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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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

