



# Epidemiology Monthly Surveillance Report

Florida Department of Health in Orange County

## What is West Nile virus?

West Nile virus (WNV) is a mosquito-borne flavivirus that causes mild to severe illness. It was first identified in Uganda in 1937. WNV was first introduced to the United States in 1999 in New York and reached Florida in 2001. Since its initial detection, human cases of WNV have been reported in all U.S. states with the exception of Alaska and Hawaii. The virus is now considered endemic in the U.S., with annual epidemics in some parts of the country, peaking in the late summer months.

As there is no vaccine against WNV, residents can protect themselves from mosquito-borne illness, including WNV, by following these [preventive steps](#).

WNV is transmitted to humans primarily through the bites of infected mosquitoes. Other modes of transmission include blood transfusion and organ transplantation. The incubation period is two to 14 days.

The clinical spectrum for WNV infection includes asymptomatic infection or mild illness (e.g., fever and headache), aseptic meningitis, and encephalitis that can progress to coma and death. Cases of WNV are often categorized into two primary groups: neuroinvasive disease and non-neuroinvasive disease. Approximately 80% of those infected show no clinical symptoms. Twenty percent have mild symptoms, and less than 1% experience the neuroinvasive form of illness. Patients at risk for severe disease include individuals over 50 years of age and immunosuppressed patients.

Laboratory testing for WNV specific IgM antibodies should be requested for serum specimens or cerebrospinal fluid (CSF). The Florida Department of Health in Orange County (phone: 407-858-1420) can provide guidance on how and when to submit samples to the Department of Health (DOH) Bureau of Public Health Laboratories.

## West Nile Virus Resources

[Florida Department of Health](#)

[Centers for Disease Control and Prevention](#)

Contact Orange County Mosquito Control at (407) 254-9120

July 2015

Volume 6, Issue 7

### Points of Interest:

- West Nile Virus Update
- Antibiotic Stewardship Education
- New Shipping Procedure for *Cyclospora* Testing to DOH Lab

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# Influenza Surveillance

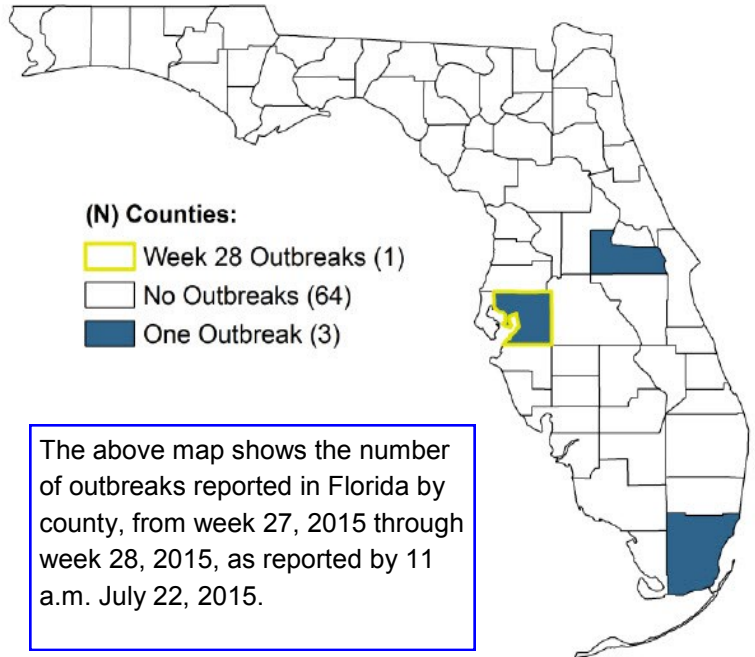
Data from Florida Flu Review

## National

⇒ Highly pathogenic avian influenza (HPAI) has been identified in U.S. backyard and commercial flocks of birds. HPAI has not been identified in Florida birds, but identifications are anticipated. No people have been identified with HPAI in Florida or the rest of the nation. More information on the HPAI outbreak can be found here: [www.floridahealth.gov/diseases-and-conditions/diseases-from-animals/novel-influenza-viruses.html](http://www.floridahealth.gov/diseases-and-conditions/diseases-from-animals/novel-influenza-viruses.html)

## Florida

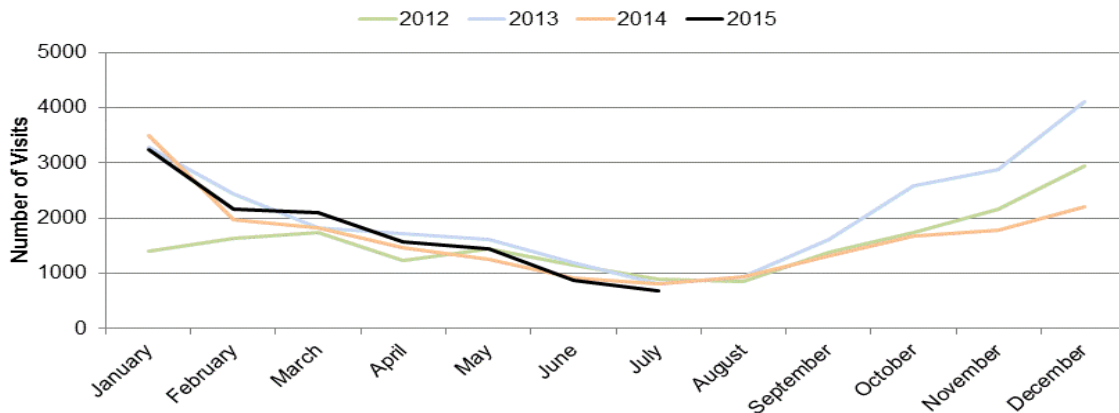
- ⇒ In week 27, the preliminary estimated number of deaths due to pneumonia and influenza in Florida is higher than levels seen in previous years at this time.
- ⇒ In weeks 27 and 28, ten specimens were submitted to Bureau of Public Health Laboratories (BPHL) for influenza testing. Two specimens (20%) tested PCR positive: one for influenza B Yamagata lineage and one for influenza A (2009 H1N1).



## Orange County

⇒ No outbreaks of influenza-like illness were reported to DOH-Orange in July 2015. A two person outbreak of influenza A (H3) was reported in a nursing home in late June 2015.

## Influenza-like Illness from Emergency Department Visits in Orange County, 2012 to 2015



## Influenza Resources:

[Florida Department of Health Weekly Influenza Activity Report](#)

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

## Vibrio vulnificus Surveillance

*Vibrio vulnificus* is a bacterium that normally lives in warm seawater and is part of a group of vibrios that are called “halophilic” because they require salt. *Vibrio vulnificus* infections are rare. *Vibrio vulnificus* is a naturally occurring bacteria in warm, brackish seawater. Water and wounds do not mix. Do not enter the water if you have fresh cuts or scrapes.

[Florida Department of Health Vibrio Information Page](#)

### Vibrio vulnificus Cases in Orange County and Florida, 2010 to 2015 (YTD)

	2010	2011	2012	2013	2014	2015
Orange County	0	0	0	1	1	0
Florida	32	35	26	42	31	20

## Ebola Surveillance

### Florida

- ⇒ Per [Executive Order Number 14-280](#) issued by the Office of the Governor, the Florida Department of Health continues the practice of twice daily in-person temperature monitoring and symptom checking of all travelers from Guinea, Liberia, and Sierra Leone during their 21-day Ebola incubation period.
- ⇒ Ebola continues to represent a very low risk to the general public in Florida and the United States.
- ⇒ **Physicians should immediately call the local health department if a patient fits the criteria of an Ebola Patient Under Investigation** (link to Patient Screening Tool below)

### International

Updated August 4, 2015:

- ⇒ Liberia, originally declared Ebola-free on May 9, has reported 6 new cases since June 28, 2015..
- ⇒ Guinea and Sierra Leone continue to experience disease transmission during the past 21 days.
- ⇒ Total Cases (Updated August 4, 2015):
  - Liberia: 10,672
  - Sierra Leone: 13,406
  - Guinea: 3,784



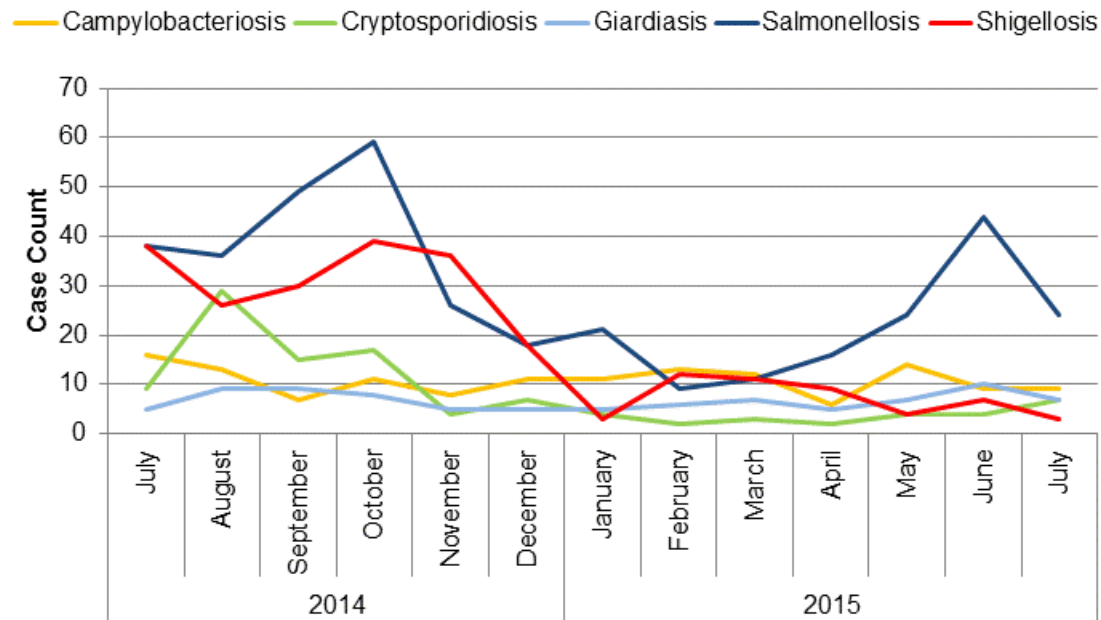
(Map Courtesy CDC)

## Ebola Resources:

- Patient Screening Tool: Florida Department of Health
- Florida Department of Health EVD Resources
- Centers for Disease Control and Prevention: Ebola Information and Guidance
- World Health Organization: Global Alert and Response Situation Reports

## Gastrointestinal Illness Surveillance

Select Reportable Enteric Diseases in Orange County, Florida, July 2014 to July 2015



### Gastrointestinal Illness Points of Interest:

- ⇒ 24 cases of Salmonellosis were reported among Orange County residents in July 2015. This represents a decrease from June 2015, but is still within the seasonal expected disease incidence trend for Salmonellosis.
- ⇒ During July, 7 foodborne illness complaints were reported to the Florida Department of Health in Orange County for investigation.
- ⇒ One foodborne outbreak at an Orange County restaurant of unknown gastrointestinal illness etiology was reported in July.

### 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](#)

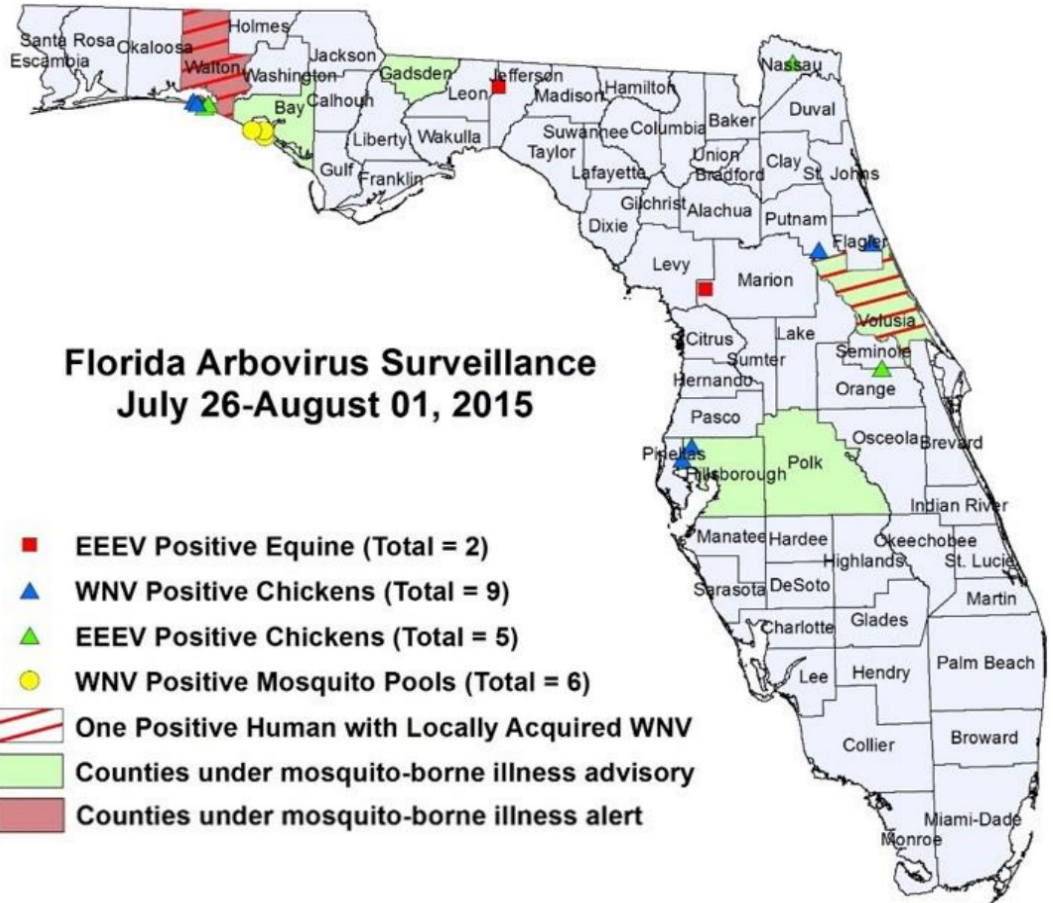
[CDC: Healthy Water](#)

**REPORT FOOD-  
BORNE ILL-  
NESS ONLINE**

# Arboviral Surveillance

## Florida

- ⇒ Bay, Gadsden, Hillsborough, Polk, and Volusia Counties are currently under mosquito-borne illness advisory. Walton County is currently under mosquito-borne illness alert.
- ⇒ Two human cases of locally acquired West Nile Virus infection were reported this week in Walton and Volusia Counties.



## Orange County

- ⇒ No human cases of West Nile Virus, St. Louis Encephalitis Virus, Eastern Equine Encephalitis Virus, or Dengue Virus were reported among Orange County residents during July 2015. One case of Chikungunya Virus was reported among Orange County residents in July 2015.
- ⇒ In July, two sentinel chickens tested positive for Eastern Equine Encephalitis Virus (EEEV) in Orange County.
- ⇒ During 2015, 14 sentinel chickens and 1 horse have tested positive for EEEV and 1 sentinel chicken tested positive for Highlands J Virus in Orange County.

### Arboviral Resources:

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

Contact Orange County Mosquito Control at (407) 254-9120

### Chikungunya Resources

[Florida Department of Health Chikungunya Information](#)

[CDC Chikungunya Information](#)

[CDC Chikungunya MMWR](#)

# Antibiotic Stewardship for Asymptomatic Bacteriuria Pilot Project at a Long-Term Care Facility in Orange County, Florida, 2015



The introduction of antibiotics into modern day medicine has made once deadly infections treatable. The manner in which antibiotics are used in healthcare today directly impacts how effective they will be tomorrow. Antibiotics are among the most commonly prescribed drugs used in medicine; however 20-50% of their use is unnecessary or inappropriate (i.e., incorrect dosing and duration, given when an individual has a viral infection instead of a bacterial infection). It has been demonstrated that overuse and misuse of antibiotics causes development of drug-resistant organisms (i.e., *Clostridium difficile* (*C. difficile*), Carbapenem-resistant Enterobacteriaceae (CRE), *Klebsiella sp.*, *E. coli sp.*) which has become one of the world’s most pressing public health threats.



To slow the development of antibiotic-resistant infections, the approach to the way infections are diagnosed and the way antibiotics are prescribed needs to change. Antibiotic Stewardship Programs (ASPs) are coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and routine of administration. The Florida Department of Health in Orange County (DOH-Orange) is pleased to have partnered with a long-term care facility (LTCF) located in Orange County, Florida to implement an ASP which addresses the issue of testing and treatment for asymptomatic bacteriuria (ASB), the colonization of bacteria in the bladder that does not cause symptoms. Many patients get antibiotics for urinary tract infections that actually have ASB and not an infection.

The pilot projects goals aim to identify efficient and effective protocols to improve antibiotic stewardship in a Long Term Care Facility setting through an integrated system of education,

## Core Elements & Advantages of Antibiotic Stewardship Programs

### Elements:

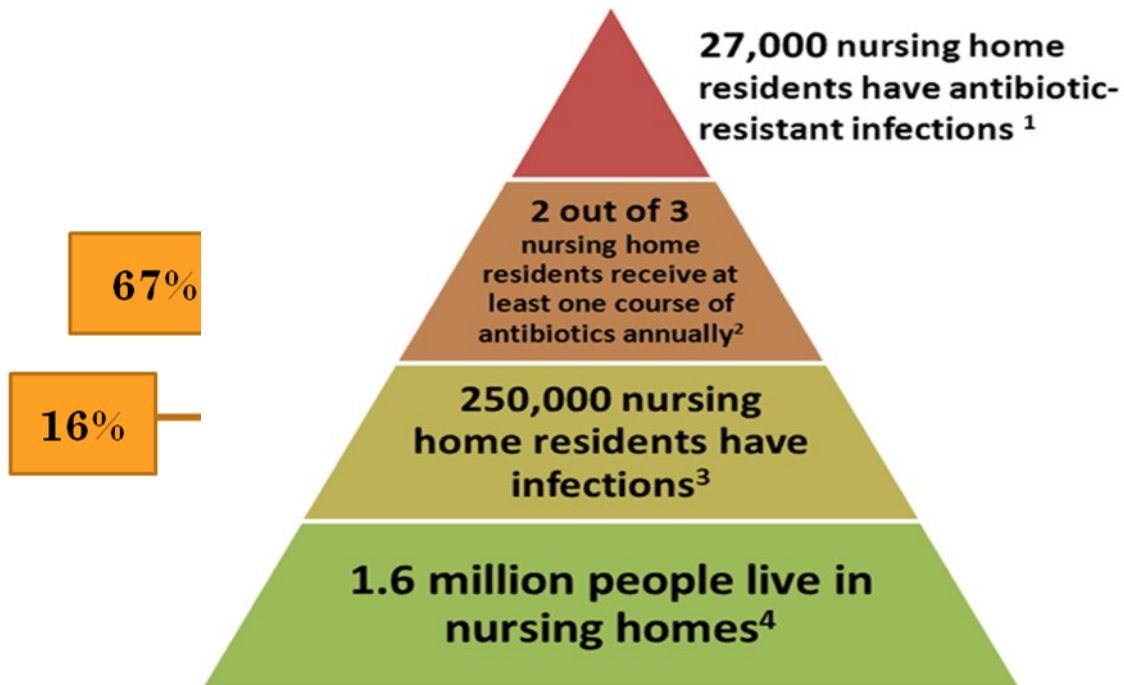
1. Leadership Commitment
2. Accountability
3. Drug Expertise
4. Action
5. Tracking
6. Reporting

### Advantages:

1. Improve Quality of Care
2. Improve Patient Safety
3. Reduce Treatment Failures
4. Increase Correct Therapy and Prophylaxis
5. Decrease Rates of *C. difficile*
6. Decrease Rates of Antibiotic Resistance



## Antibiotic Use in Long-Term Care Facilities



**Something isn't adding up...**

- Estimates of the cost of antibiotics in the long-term care setting range from \$38 million to \$137 million per year.
- Some long-term care facilities inconsistently use criteria for diagnosing infections.
- The most common infections treated with antibiotics in nursing homes are urinary tract infections (32%), respiratory tract infections (33%) and skin and soft tissue infections (12%).

### Antibiotic Stewardship Resources

- ⇒ Centers for Disease Control and Prevention (2015). Core Elements of Hospital Antibiotic Stewardship Programs. Retrieved from <http://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html>
- ⇒ Huttner A., Harbarth S., Carlet J., et al. Antimicrobial resistance: a global view from the 2013 World Healthcare-Associated Infectious Disease Forum. *Antimicrobial Resistance and Infection Control*. Nov 18 2013; 2(1): 31.
- ⇒ Centers for Disease Control and Prevention, National Center for Health Statistics, 1999 National Nursing Home Survey. *Nursing home residents, number, percent distribution, and rate per 10,000 by age at interview, according to sex, race and region: United States, 1999.*
- ⇒ Surveillance Definitions of Infections in Long-Term Care Facilities: Revisiting the McGeer Criteria. Stone, Nimalie D. et al. *Infection Control and Hospital Epidemiology*, Vol. 33, No. 1 (October 2012), pp. 965-977.

Disease (by onset of illness)	ORANGE				All Counties			
	July		Cumulative		July		Cumulative	
	2015	Median (5yr)	2015	Median (5yr)	2015	Median (5yr)	2015	Median (5yr)
Arsenic Poisoning	1	0	1	0	3	1	12	3
Brucellosis	1	0	1	0	5	1	8	5
Campylobacteriosis	9	16	75	69	363	307	2248	1553
Carbon Monoxide Poisoning	0	0	3	2	22	17	131	102
Chikungunya Fever	1	0	4	0	8	0	88	0
Cholera (Vibrio cholerae Type O1)	0	0	2	0	0	0	4	2
Ciguatera Fish Poisoning	0	0	1	0	7	5	21	21
Creutzfeldt-Jakob Disease (CJD)	0	0	1	0	0	0	15	14
Cryptosporidiosis	7	2	26	10	73	36	372	255
Cyclosporiasis	1	1	1	1	10	21	13	35
Dengue Fever	0	3	1	6	7	16	28	57
Escherichia coli: Shiga Toxin-Producing (STEC) Infection	6	2	16	6	52	43	267	251
Giardiasis	7	5	47	35	94	108	571	641
Haemophilus influenzae Invasive Disease	2	1	5	8	13	13	105	158
Hansen's Disease (Leprosy)	0	0	1	0	3	1	15	5
Hemolytic Uremic Syndrome (HUS)	0	0	1	0	1	0	4	3
Hepatitis A	0	0	1	2	18	9	78	69
Hepatitis B: Acute	0	1	9	7	49	28	289	183
Hepatitis B: Chronic	30	37	312	234	446	377	3324	2646
Hepatitis B: Perinatal	0	0	0	0	0	0	0	0
Hepatitis B: Surface Antigen in Pregnant Women	6	8	42	40	41	51	249	296
Hepatitis C: Acute	1	1	3	6	12	18	100	89
Hepatitis C: Chronic	151	146	1158	991	3068	2661	21529	14936
Hepatitis E	0	0	1	0	0	0	2	2
Lead Poisoning	1	1	14	14	85	73	531	461
Legionellosis	1	3	9	8	25	21	178	108
Leptospirosis	0	0	0	0	0	0	1	0
Listeriosis	0	1	0	2	7	3	20	21
Lyme Disease	0	0	2	2	44	22	126	61
Malaria	0	1	2	5	8	11	32	42
Measles (Rubeola)	0	0	0	0	0	0	11	1
Meningitis: Bacterial or Mycotic	0	1	0	8	13	16	79	105
Meningococcal Disease	0	0	0	1	2	3	18	38
Mumps	0	0	0	0	2	1	15	7
Pertussis	1	3	10	13	36	77	200	344
Rabies: Possible Exposure	5	7	53	53	233	232	1902	1463
Salmonellosis	27	34	152	140	718	725	3006	2786
Shigellosis	3	6	49	62	222	172	1371	1203
Strep pneumoniae Invasive Disease: Drug-Resistant	2	1	10	27	8	27	103	382
Strep pneumoniae Invasive Disease: Drug-Susceptible	3	1	13	15	12	27	178	402
Tularemia (Francisella tularensis)	0	0	0	0	1	0	1	0
Typhoid Fever (Salmonella Serotype Typhi)	0	0	0	1	1	2	6	7
Varicella (Chickenpox)	5	1	11	20	43	36	460	538
Vibriosis (Vibrio alginolyticus)	1	0	2	1	6	7	37	29
Vibriosis (Vibrio cholerae Type Non-O1)	0	0	0	0	1	1	5	5
Vibriosis (Vibrio parahaemolyticus)	0	0	0	0	2	6	25	21
Vibriosis (Vibrio vulnificus)	0	0	0	0	7	7	22	15
West Nile Virus Neuroinvasive Disease	0	0	0	0	4	0	4	0
West Nile Virus Non-Neuroinvasive Disease	0	0	0	0	0	0	0	0
<b>Total</b>	<b>272</b>	<b>283</b>	<b>2039</b>	<b>1789</b>	<b>5775</b>	<b>5182</b>	<b>37804</b>	<b>29365</b>



## Specimen Submission for *Cyclospora* Confirmation Testing Florida Department of Health Bureau of Public Health Laboratories

To assist the Centers for Disease Control and Prevention with further epidemiological surveillance and development of molecular testing methods for *Cyclospora*, the Division of Disease Control and Health Protection including the Bureau of Public Health Laboratories is requesting that in addition to the formalin preserved specimen routinely submitted for confirmation, healthcare providers and laboratories submit one of the following: 1) Stool preserved in EcoFix, UniFix, TotalFix, Zn-PVA or Cu-PVA, 2) Cary-Blair medium or viral transport medium, 3) specimen preserved in ethanol, 4) unpreserved stool, or 5) frozen specimens are acceptable but not preferred.

[Follow the hyperlink to read the full letter, including additional details, from Dr. Gillis, Laboratory Director of the Bureau of Public Health Laboratories in Miami.](#)

### 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 [Orange County](#).



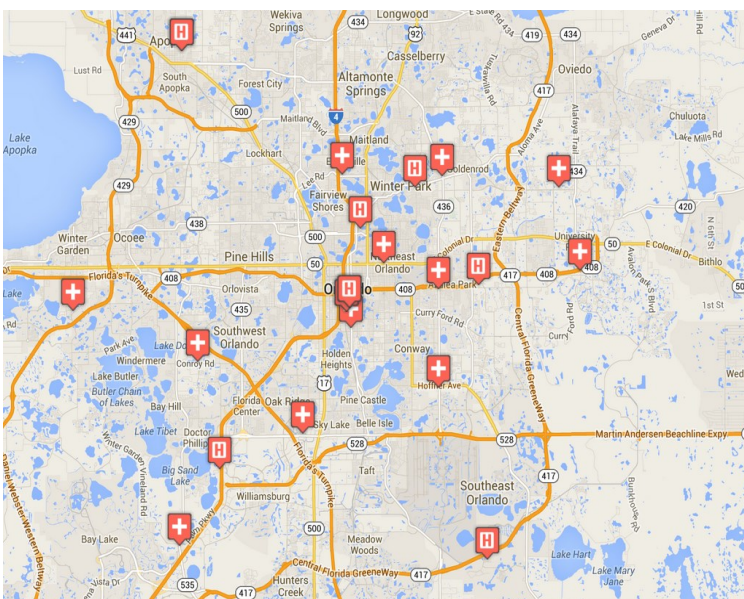
### Florida Department of Health: ESSENCE



Hospital linked to ESSENCE



Florida Hospital Centra Care Clinic linked to ESSENCE



Since 2007, the Florida Department of Health has operated the Early Notification of Community-based Epidemics (ESSENCE), 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 past seven 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 from ESSENCE. Florida currently has 186 emergency departments and 30 urgent care centers (Florida Hospital Centra Care) reporting to ESSENCE-FL for a total of 216 facilities.

## Florida Department of Health in Orange County

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## Electronic Health Alerts & Epidemiology

### Monthly Surveillance Reports

Email Contact Information to:

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*The Epidemiology Program conducts disease surveillance and investigates suspected occurrences of infectious diseases and conditions that are 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.*

*Data is collected and examined to determine the existence of trends. 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 ensures 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 IS PROVISIONAL**