Epidemiology Monthly Surveillance Report

Florida Department of Health in Orange County

Severe Flu Cases In Unvaccinated Pregnant Women and Patients with Comorbidities

It's Not Too Late…. To Vaccinate!!

Severe flu cases, including deaths, among unvaccinated patients, have been reported over the past several weeks both nationally, and also from regions in Florida, including Central Florida. These cases include hospitalizations requiring ICU care among pregnant women and others who are at high risk for serious flu-related complications. Many of the cases, in addition to the pregnancy cases, have been in young and middle-aged adults (a trend seen also during the 2009 pandemic), and while most of these people with severe illness have had risk factors for influenza-associated complications, including pregnancy and morbid obesity, several have not.

Persons at risk for medical complications attributable to severe influenza include adults and children who have chronic pulmonary (including asthma) or cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including Diabetes)
For additional conditions, see "Flu vaccination information", below.

Most of these patients were infected with influenza A (H1N1) pdm09 (pH1N1) virus, which has been the predominant circulating virus thus far this season; the same virus that emerged in 2009 to cause the pandemic.

This is the first season that the virus has circulated at high levels since the pandemic.

As of January 10th, 61.6% of the hospitalizations in the US have been in people 18 to 64 years old. Historically, most flu hospitalizations occur in people 65 and older. This pattern of more hospitalizations among younger people was also seen during the 2009 H1N1 pandemic. Furthermore, all of the pH1N1 viruses tested for vaccine compatibility were characterized as A/California/7/2009-like. This is the influenza A (H1N1) component of the currently available Northern Hemisphere vaccines. No significant changes in pH1N1 viruses would suggest increased virulence or transmissibility have been detected as of this writing.

All persons (with rare exceptions- see "Flu vaccination information", below) 6 months and older should be vaccinated annually, and remember it is not too late to vaccinate this season.

Online resources: Flu vaccination information:

http://www.cdc.gov/flu/professionals/vaccination/vax-summary.htm
Situation update: http://www.cdc.gov/flu/weekly/summary.htm

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Special points of interest:

- **It is not too late to Vaccinate**
- **Influenza causing severe illness and increase in hospital— ICU admissions Orange County, Influenza A 2009 H1N1 remains the dominant strain**
- **Carbon Monoxide Poisoning is reportable within one working day of identification/ diagnosis**
- **First confirmed case of human Infection with Avian Influenza A (H5N1)**

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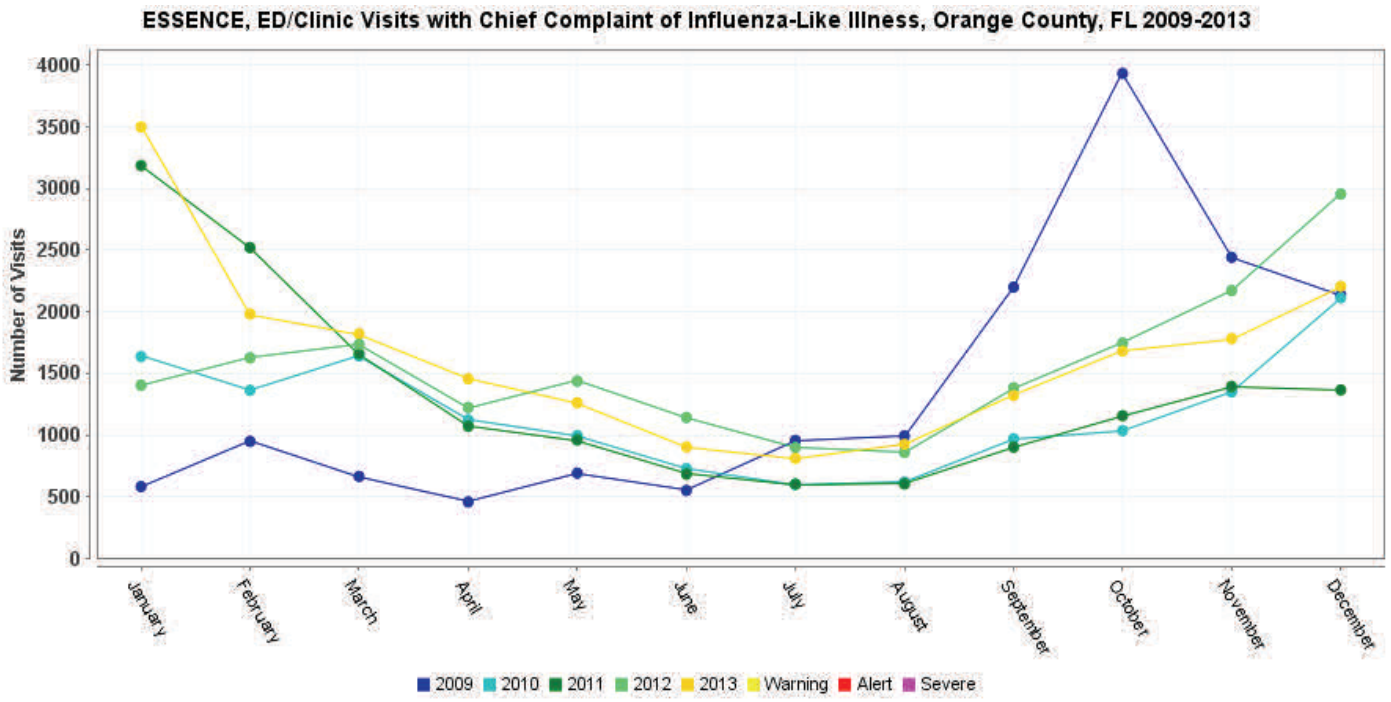
Influenza Surveillance



Orange

⇒ We are currently experiencing **moderate** influenza activity; reflecting the increase from mild influenza activity illustrated in the map of Week 52 below.

⇒ No influenza or ILI outbreaks have been reported to date this flu season.

Florida

⇒ Most Florida counties are reporting mild influenza activity. Thirty counties reported increasing influenza activity in Week 52.

⇒ Emergency Departments and urgent care centers on ESSENCE have reported an overall increase in ILI visits in recent weeks. Statewide visits are at typical levels for this time of year.

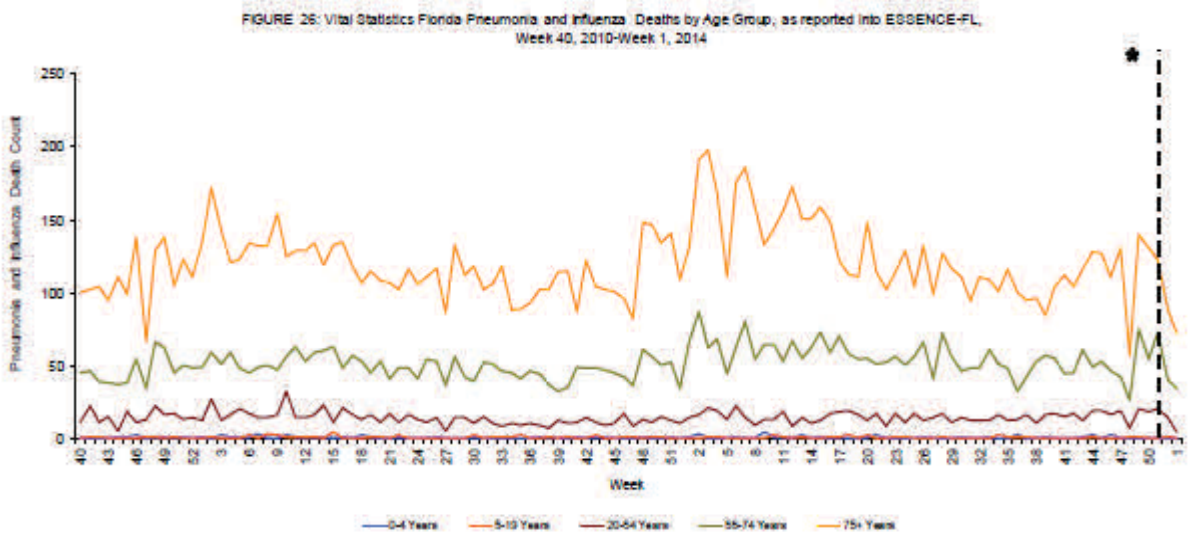
⇒ However, the number of pregnant women presenting to EDs for care is above expected levels.

⇒ The most common influenza subtype detected continues to be influenza A (2009 H1N1).

⇒ No pediatric influenza-associated deaths were reported in week 52. One pediatric influenza-associated death was reported in week 45 for the 2013-2014 season in an unvaccinated child from Palm Beach County with underlying medical conditions.

Florida Influenza Activity Week 52

Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, ESSENCE, Week 40 2010 –Week 1, 2014



Influenza Points of Interest: Novel Influenza A (H7N9) Virus

- ⇒ On April 1, 2013, the World Health Organization (WHO) reported that confirmed human infection with novel avian influenza A (H7N9) virus was identified in China. The first onset of illness was on February 19, 2013.
- ⇒ WHO reports 157 total confirmed cases by the beginning of 2014, all in or with recent travel to China. Forty-nine infected individuals have died. DOH continues to actively monitor the situation.
- ⇒ There is no evidence that avian influenza A (H7N9) virus is capable of sustained person-to-person transmission.
- ⇒ **There is no evidence of avian influenza A (H7N9) virus infection in the United States**. To date, 152 of the human H7N9 cases and 48 deaths were confirmed on mainland China; five additional cases and one death have been reported in sovereign regions of China: Taiwan (2 cases), Hong Kong (3 cases/ 1 death).
- ⇒ No travel advisories to China are in effect.
- ⇒ The CDC Health Advisory for testing, treatment and infection control guidelines for suspect H7N9 cases can be found at the following link:

http://www.cdc.gov/flu/avianflu/h7n9-virus.htm

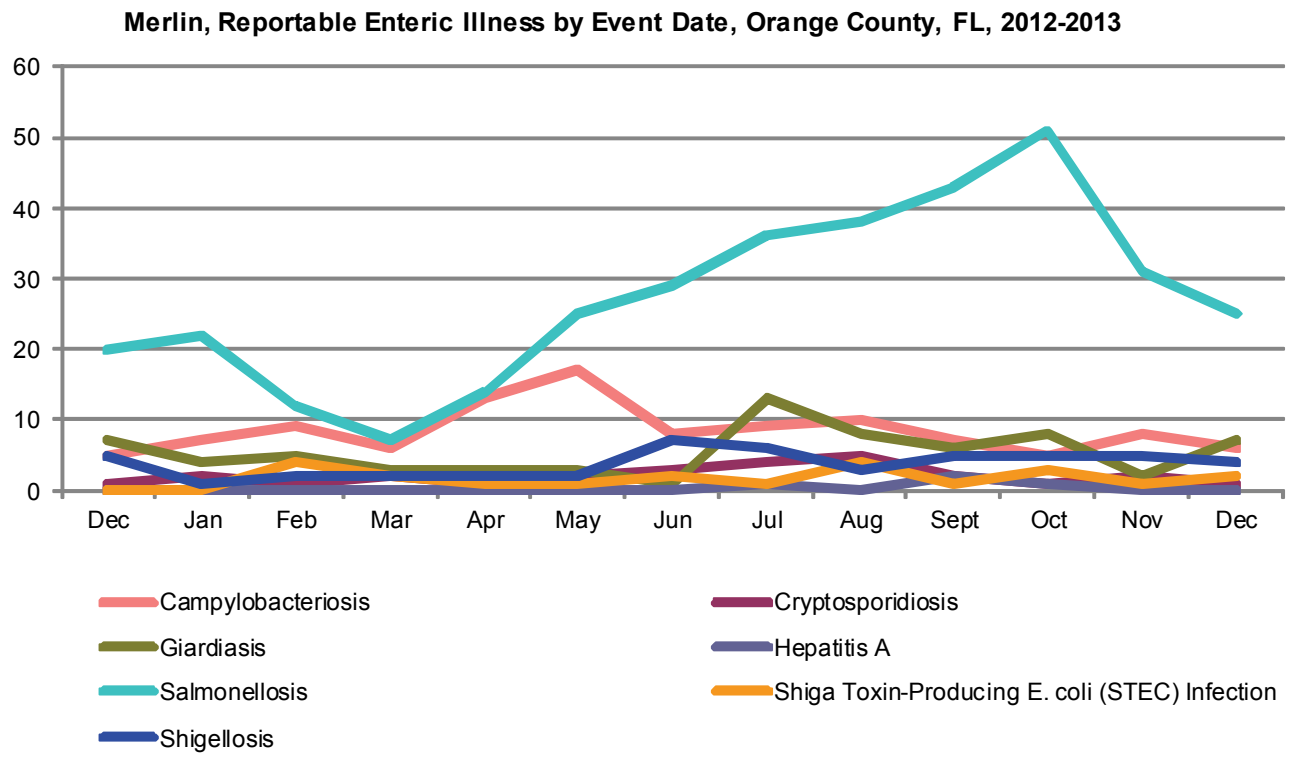
Influenza Resources:

Florida Department of Health Weekly Influenza Activity Report
http://www.doh.state.fl.us/floridaflu/reports.htm

Center for Disease Control and Prevention Weekly Influenza Activity Report
http://www.cdc.gov/flu/weekly/fluactivitysurv.htm

2011-2012 Influenza Vaccination Estimates
www.cdc.gov/flu/professionals/vaccination/coverage_1112estimates.htm

Gastrointestinal Illness Surveillance



Gastrointestinal Illness Points of Interest:

- ⇒ All reportable enteric disease cases are starting to decline per the typical seasonal trend.
- ⇒ Statewide, six alerts of outbreaks of norovirus or norovirus-like illness were reported in EPICOM (DOH's Health Alert Network) in December 2013
- ⇒ During December, five foodborne illness complaints were reported to the Florida Department of Health in Orange County (DOH-Orange) for investigation.

Gastrointestinal Illness Resources

Florida Online Foodborne Illness Complaint Form - Public Use
http://www.doh.state.fl.us/Environment/medicine/foodsurveillance/Online_Foodborne_Complaint_Form.html

Florida Food Recall Searchable Database
http://doh.state.fl.us/environment/medicine/foodsurveillance/Recalls_Page.htm

Florida Department of Health - Norovirus Outbreak Control Documents
http://www.doh.state.fl.us/Disease_ctrl/epi/Norovirus.htm

Arboviral Surveillance

Arboviral Activity in Orange County, Florida, December 2013						
Disease	Bird/Sentinel Chicken		Horse Case		Human Case	
	Month	Cumulative (YTD)	Month	Cumulative (YTD)	Month	Cumulative (YTD)
Eastern equine encephalitis virus	—	27	—	—	—	—
St. Louis encephalitis virus	—	—	—	—	—	—
West Nile virus	—	1	—	—	—	—
Dengue virus	—	—	—	—	—	17

Statewide:

⇒ 23 cases of locally acquired dengue have been reported in 2013.

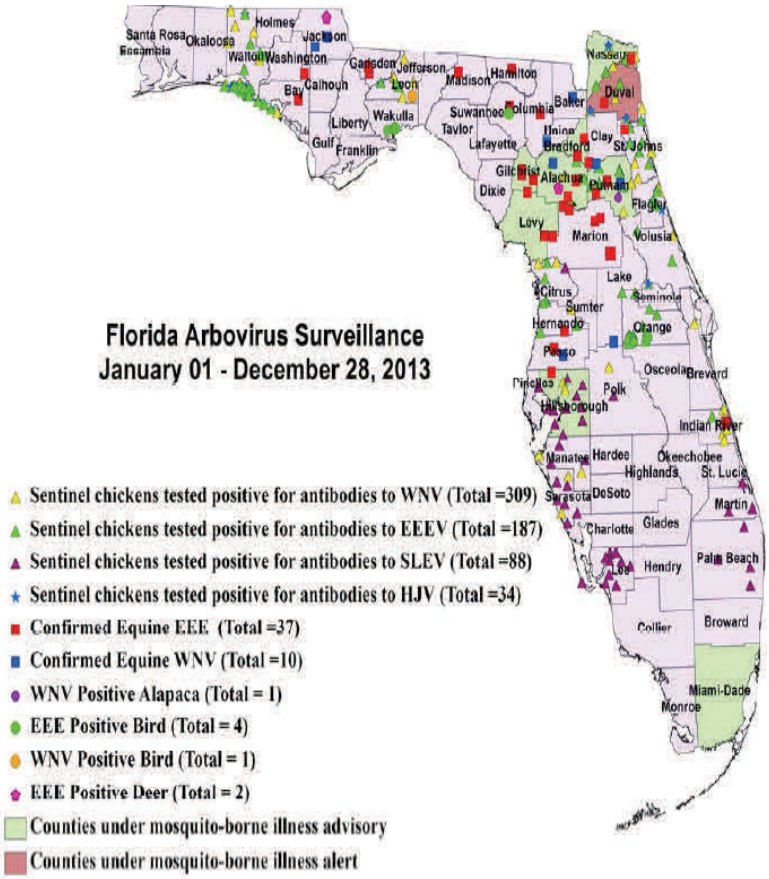
⇒ 120 cases of imported dengue have been reported in 2013.

⇒ 52 cases of imported malaria have been reported in 2013.

Orange County:

⇒ 17 cases of imported dengue have been reported in 2013.

⇒ 8 cases of imported malaria have been reported in 2013.



Arboviral Resources

Weekly Florida Arboviral Activity Report (Released on Monday's)
http://www.doh.state.fl.us/Environment/medicine/arboviral/surveillance.htm

Orange County Mosquito Control
http://www.orangecountyfl.net/FamiliesHealthSocialSvcs/MosquitoSafety.aspx

First Case of Human Infection of Avian H5N1 in North America

On January 8, 2014, the Public Health Agency of Canada reported the first confirmed case of human infection with avian influenza A (H5N1) virus identified in North America. The patient exhibited symptoms while returning from travel to Beijing, China, on December 27, 2013. The patient was hospitalized on January 1, 2014, and subsequently died on January 3, 2014.

Since avian influenza A (H5N1) viruses have only been rarely, and never sustainably, transmitted from person to person, there is a very low risk of subsequent related cases. To date, no cases of human infection with avian influenza A (H5N1) viruses or avian influenza A (H7N9) viruses have been reported in the United States.

Clinicians should consider the possibility of avian influenza A (H5N1) virus infection in persons exhibiting symptoms of severe respiratory illness who have appropriate travel or exposure history. This includes persons with recent travel (within 10 days of illness onset) to areas where human cases of avian influenza A (H5N1) virus infection have been detected or where avian influenza A (H5N1) viruses are known to be circulating in animals.

Clinicians should also be aware that human infection with avian influenza A (H7N9) viruses have been reported among persons in China and Taiwan since April 2013, and may exhibit similar symptoms to those of influenza A (H5N1), including pneumonia, respiratory failure, and acute respiratory distress syndrome. Influenza A (H7N9) infections in humans have also been associated with high mortality. No cases of influenza A (H7N9) infections in humans have been reported in North America.

The information above has been excerpted from the CDC Health Advisory (CDCHAN-00360), distributed via the CDC Health Alert Network on January 15, 2014. To view the full advisory:

CDC Health Advisory (CDCHAN-00360):

http://emergency.cdc.gov/HAN/han00360.asp

Interim Guidance on Case Definitions:

http://www.cdc.gov/flu/avianflu/h5n1/case-definitions.htm

Avian Influenza: Information for Health Professionals and Laboratorians:

http://www.cdc.gov/flu/avianflu/healthprofessionals.htm

Please call the Epidemiology program at Florida Department of Health in Orange County at 407-858-1420, if you have any questions or to notify us of suspect cases.

The Florida Department of Health has implemented a new email address format for all DOH users:

firstname.lastname@flhealth.gov (i.e. John.Doe@flhealth.gov)

The new format took effect on October 1, 2013. Please use the new format and update your DOH contacts to ensure your messages are received.

Orange County Select Reportable Disease Incidence Table December 2013

Disease	ORANGE					All Counties				
	December		Cumulative (YTD)			December		Cumulative (YTD)		
	2013	2012	2013	2012	Mean (2008 - 2012)	2013	2012	2013	2012	Mean (2008 - 2012)
AMEBIC ENCEPHALITIS	0	0	0	0	0.2	0	0	1	0	0.8
BRUCELLOSIS	0	0	3	0	0	3	0	12	17	10.2
CAMPYLOBACTERIOSIS	8	5	107	177	86.8	229	157	2671	2655	1695.4
CARBON MONOXIDE POISONING	2	1	18	7	3.6	13	8	181	93	87.8
CHOLERA (VIBRIO CHOLERA, TYPE 01)	0	0	0	1	0.4	1	0	5	7	4.8
CIGUATERA FISH POISONING	0	0	0	0	0.2	4	4	52	25	39.4
CREUTZFELDT-JAKOB DISEASE (CJD)	0	0	1	0	0.8	0	0	20	25	19.2
CRYPTOSPORIDIOSIS	2	2	26	16	25.8	32	42	428	473	471.8
CYCLOSPORIASIS	0	0	1	0	2.6	1	1	49	25	48.8
DENGUE FEVER	0	2	19	19	8.4	16	25	189	138	99.2
EASTERN EQUINE ENCEPHALITIS- NEUROINVASIVE	0	0	0	0	0	0	0	2	2	1.4
EASTERN EQUINE ENCEPHALITIS- NON-NEUROINVASIVE	0	0	0	0	0	0	0	0	0	0
GIARDIASIS	7	4	70	64	86.4	104	89	1130	1117	1571.6
H. INFLUENZAE INVASIVE DISEASE	4	2	22	12	9	36	22	282	238	214.6
HEMOLYTIC UREMIC SYNDROME	0	0	0	0	0.4	4	0	14	1	4.6
HEPATITIS A	0	1	4	7	8.4	6	10	137	126	154
HEPATITIS B- ACUTE	3	1	10	11	22	34	28	383	297	302.8
HEPATITIS B- CHRONIC	19	25	391	343	427.4	346	348	4456	4161	4218.8
HEPATITIS B, HBsAg IN PREGNANT WOMEN)	2	2	61	63	72	27	29	465	409	506.8
HEPATITIS B- PERINATAL	0	0	1	0	0.2	0	0	2	1	0.8
HEPATITIS C- ACUTE	2	2	6	15	10.2	13	14	223	170	100.6
HEPATITIS C- CHRONIC	132	103	1679	1381	1769.2	2274	2204	31182	26481	23971.6
INFLUENZA-ASSOCIATED PEDIATRIC MORTALITY	0	0	0	0	0	0	1	8	4	4.8
LEAD POISONING	4	1	23	37	28.8	114	42	771	977	797.8
LEGIONELLOSIS	1	1	24	18	18.4	32	16	285	233	190.2
LEPTOSPIROSIS	0	0	0	0	0.6	0	0	1	1	1.6
LISTERIOSIS	1	1	3	2	2.2	2	4	41	33	39
LYME DISEASE	0	0	5	3	4.8	19	10	210	132	118
MALARIA	0	0	8	7	9.6	5	3	61	64	93.6
MEASLES	0	0	6	0	1	0	0	9	0	3.2
MELIOIDOSIS	0	0	0	1	0.2	0	0	0	1	0.4
MENINGITIS (BACTERIAL, CRYPTOCOCCAL, MYCOTIC)	0	1	9	11	16.8	17	19	156	196	205
MENINGOCOCCAL DISEASE	0	0	2	0	1.6	7	3	66	50	55.6
MUMPS	0	0	1	0	0.6	2	2	9	9	21.6
PERTUSSIS	3	1	58	41	18.8	71	21	744	575	405.8
PESTICIDE-RELATED ILLNESS OR INJURY	0	0	5	12	4.8	1	0	70	71	57.6
RABIES, ANIMAL	0	0	0	0	0	0	0	0	0	0
RABIES- POSSIBLE EXPOSURE	18	6	96	89	91.6	222	171	2763	2403	2066.8
ROCKY MOUNTAIN SPOTTED FEVER	0	0	2	1	0.2	0	0	32	32	18.6
S. AUREUS INFECTION, INT-R-VANCOMYCIN (VISA)	1	0	1	0	0	2	0	7	8	4.2
S. AUREUS- COMMUNITY ASSOCIATED MORTALITY	0	0	0	0	0.2	1	1	17	9	11
S. PNEUMONIAE- INVASIVE DISEASE- DRUG-RESISTANT	3	1	37	24	38.6	54	39	543	466	695.8
S. PNEUMONIAE- INVASIVE DISEASE- SUSCEPTIBLE	3	3	27	24	26.4	68	57	599	548	662.8
SALMONELLOSIS	33	19	334	333	318.6	489	392	6410	6757	6192.2
SHIGA TOXIN-PRODUCING E. COLI (STEC) INFECTION	2	5	22	20	11	48	31	544	424	278.4
SHIGELLOSIS	4	8	45	107	97.6	132	49	1128	1790	1377.2
STREPTOCOCCUS INVASIVE DISEASE (GROUP A)	1	0	19	11	13.4	37	27	310	253	263
VARICELLA	0	2	36	30	42	48	50	665	817	1098.2
VIBRIO (VIBRIO ALGINOLYTICUS)	1	0	2	2	1	2	2	50	58	41.4
VIBRIO (VIBRIO PARAHAEMOLYTICUS)	0	0	1	0	0.2	6	1	57	44	30.8
VIBRIO(VIBRIO VULNIFICUS)	0	0	1	0	0.2	0	1	46	27	27
Total	256	199	3188	2895	3368.2	4531	3928	57658	52649	49604.6

The Top 10 Reported Disease and Conditions in Orange County Year-To-Date are Highlighted in GREY.

Testing and Reporting Carbon Monoxide Poisoning

According to Florida Administrative Code 64D-3, Chapter 381, laboratories, physicians and emergency responders are required to report Carbon Monoxide poisonings to the Health Department within ONE working day of identification/diagnosis.

Carbon monoxide (CO) is an odorless, colorless and poisonous gas that can cause sudden illness and death if sufficient concentrations overtake the ambient air. When temperatures drop to near freezing in Florida, some people turn to the use of alternative sources of heating (i.e. gas stove burners, ovens, kerosene heaters and generators, etc.), which very often cause CO to build up in a home, garage or camper and eventually poison the people and animals inside.

The clinical presentation of acute CO poisoning varies depending on the duration and magnitude of exposure and between individuals with the same degree of exposure and/or the same venous carboxyhemoglobin (COHb) level.

Criteria for diagnosis: Laboratory tests to confirm CO poisoning involve immediate measuring of the patient's COHb level. Venous or arterial blood may be used for testing. It is important to know how much time has elapsed since the patient was removed from the toxic environment, because the elapsed time and any oxygen therapy given corrupts the COHb level measured.

To report cases please call DOH-Orange Epidemiology at (407) 858-1420. For additional information on Carbon Monoxide symptoms, testing and treatment: http://www.cdc.gov/co.html

Other Disease Resources

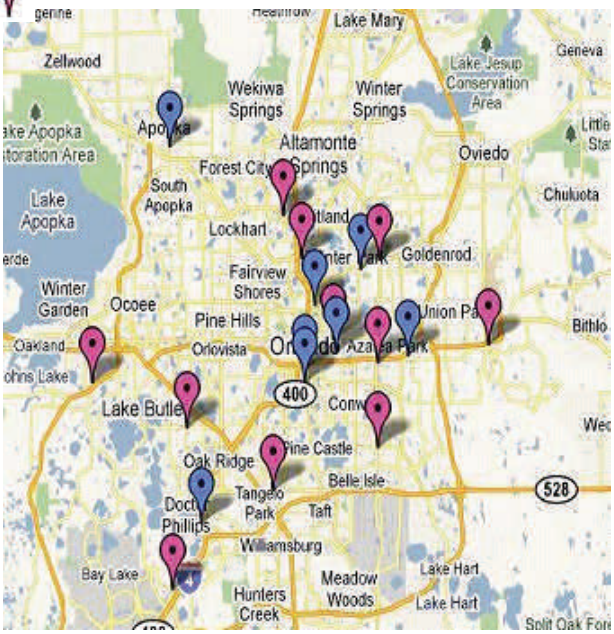
In the structure of DOH-Orange, tuberculosis, sexually transmitted infections, and human immunodeficiency virus are housed in separate programs from the Epidemiology Program. We recognize the importance of these diseases for our community partners and for your convenience have provided the **below link** for surveillance information on these diseases in Florida and Orange County.

http://www.doh.state.fl.us/Disease_ctrl/aids/trends/msr/msr.html

Florida Department of Health: ESSENCE

Hospital linked to ESSENCE

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.

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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