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EPI EXAMINER

A Monthly Epidemiology Report

December, 2017

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Disease Summary:

In December, a total of 408 cases of various diseases were reported to the Florida Department of Health in Broward County (DOH-Broward). Among them, there were twenty-five cases of campylobacteriosis, one case of listeriosis, seven cases of acute hepatitis B, four cases of acute hepatitis C, one case of hepatitis E, eleven cases of possible rabies exposure, eleven cases of mumps, and one case of vibriosis (*Vibrio vulnificus*).

Food Recalls:

There was one food recall reported in Florida for the month of December 2017.

Brand Name	Food	Recall Date	Health Risk
Kroger Comforts FOR BABY - FDA Alert	Water with Fluoride 1 Gallon bottles - Mold/Allergy risk	12/4/2017	<i>Talaromyces penicillium</i>
Springfield Smoked Fish	Smoked Salmon Products	12/21/2017	<i>Listeria</i>

Link to food recalls: <http://www.floridahealth.gov/diseases-and-conditions/food-and-waterborne-disease/florida-food-recalls.html>

All data are provisional.

Table 1 . Provisional Cases* of Selected Notifiable Disease, Broward County, Florida, December 2017

	BROWARD COUNTY					FLORIDA				
	December			Cumulative (YTD)		December			Cumulative (YTD)	
	2017	2016	Mean†	2017	2016	2017	2016	Mean†	2017	2016
A. Enteric Infections										
Campylobacteriosis	25	10	13.2	256	133	370	338	262	4336	3621
Cryptosporidiosis	1	1	1.4	35	19	51	37	54.2	558	583
<i>E.Coli</i> , Shiga Toxin-Producing Infection**	4	2	4	60	65	65	44	38.2	657	610
Giardiasis, Acute	6	12	8.4	96	84	85	94	94.4	1008	1128
Hemolytic Uremic Syndrome	1	0	0.2	1	0	1	2	1.4	11	8
Listeriosis	1	0	0	9	4	5	9	5.4	54	43
Salmonellosis	39	53	42.4	646	538	532	521	512.8	6579	6287
Shigellosis	5	4	14	108	118	105	95	117.2	1318	975
B. CNS Diseases & Bacteremias										
Strep pneumoniae Invasive Disease										
Drug-Susceptible	1	0	0.8	7	7	5	5	6.8	34	46
C. Viral Hepatitis										
Hepatitis A	1	1	1.2	36	9	35	12	13	280	122
Hepatitis B, Acute	7	4	2.4	57	45	77	67	45.2	790	710
Hepatitis B, Pregnant Women	6	6	4.4	108	78	39	60	50.4	473	448
Hepatitis C, Acute	4	2	0.6	28	25	36	27	19.4	409	301
Hepatitis E	1	0	0	2	0	2	0	0.2	8	5
D. Vector Borne, Zoonoses										
Ciguatera Fish Poisoning	1	0	0.6	3	4	7	4	3.6	31	33
Lyme Disease	1	0	0.4	12	17	32	36	24.8	248	241
Malaria	1	0	1	6	8	8	2	4.2	59	64
Rabies, Possible Exposure	11	7	2.2	173	114	367	271	292.8	3486	3306
Zika Virus Disease and Infection, Non-Congenital	3	8	1.6	49	173	23	112	22.4	379	1282
E. Others										
Carbon Monoxide Poisoning	4	1	1.6	66	7	58	32	21.2	821	273
Legionellosis	3	4	2.6	50	27	96	46	29.4	565	378
Mumps	11	0	0	22	3	37	2	1.6	126	25
Pertussis	1	0	0.6	24	9	32	30	38.2	368	335
Varicella (Chickenpox)	5	7	2.6	90	55	61	62	53.2	655	733
Vibriosis (Other <i>Vibrio</i> Species)	1	0	0.2	1	1	10	3	1.4	65	19
Vibriosis (<i>Vibrio vulnificus</i>)	1	0	0	2	1	2	2	1.8	51	48

* Confirmed, Probable, Suspect and Unknown Cases based on date of report as reported in Merlin.

† Mean of the number of cases of the same month in the previous five years.

** Includes *E. coli* O157:H7; shiga-toxin positive, serogroup non-O157; and shiga-toxin positive, not serogrouped.

Highlighted diseases/conditions are higher than expected for the current month in Broward.

The Merlin system is Florida's state repository of reportable disease case reports, including automated notification of staff about individual cases of high priority diseases. Data are extracted using event date which is usually the date of onset of illness, and when that is unknown, event date may be date of lab report, or date of diagnosis.

All data are provisional.

The Electronic Surveillance System for the Early Notification of Community Based Epidemics (ESSENCE) was developed by Johns Hopkins University and Walter Reed Army Institute of Research. It is a syndromic surveillance tool used to monitor potential bioterrorism threats and reportable diseases. Chief complaint data is transmitted daily to the ESSENCE system from participating hospital emergency rooms. DOH-Broward monitors a total of 17 reporting hospitals in Broward County. ESSENCE groups the chief complaint data into twelve syndrome groups, including: botulism-like, exposure, fever, gastrointestinal (GI), hemorrhagic, influenza-like-illness (ILI), neurological, rash, respiratory, shock/coma, injury, and other. ESSENCE creates automatic warnings or alerts for the monitoring of the twelve syndrome groups by comparing statistical differences in observed and predicted disease based on a 28-day average. Specialized queries have also been developed to monitor Florida state reportable diseases in Broward County. When an observed value is statistically higher at the $p < .05$ level, a yellow warning flag is generated.

Figure 1. ESSENCE Daily Emergency Department Visits, Broward, December 2017

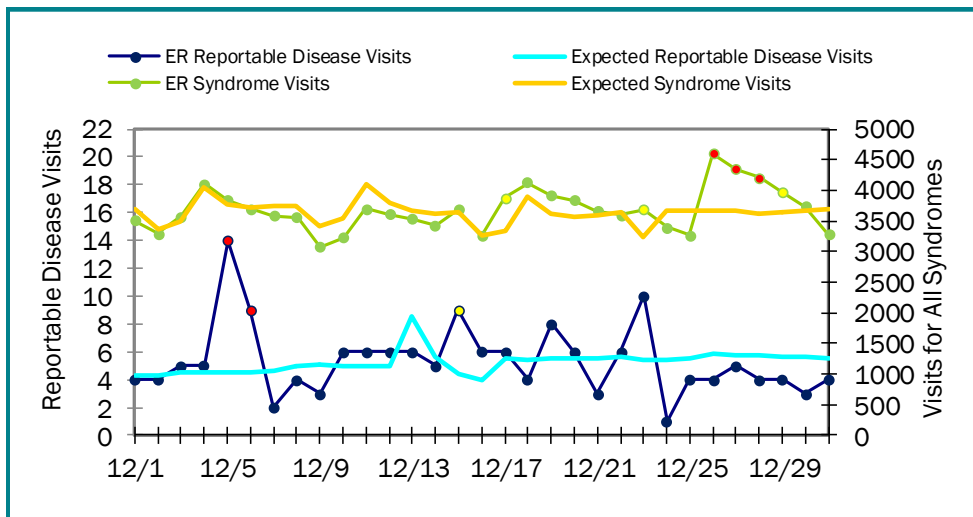


Figure 1. There are one warning and two alerts for E.R reportable disease visits; and three warnings and three alerts for E.R syndromic visits.

Warning - Yellow data point
Alert - Red data point

Table 2. ESSENCE Chief Complaint Alerts and Warnings for Reportable Disease and Chief Complaint Syndromes, December 2017

Disease	Alert Dates	Warning Dates	Syndrome	Alert Dates	Warning Dates
All Reportable Disease Query	5, 6	15	Botulism-like Illness	1	7, 27, 28
Vaccine Preventable Diseases ¹	15, 17, 23	18, 19	Exposure	5	6, 23
Hepatitis A and B	17	None	Fever	17-19, 23-28	4, 5, 20, 21, 29
Meningitis (may not be bacterial)	13-15, 18	None	Gastrointestinal Illness	26-28	None
Varicella (chicken pox)	None	1	Hemorrhagic Illness	11, 26	29
Vector Borne Diseases	None	None	Influenza-like Illness (ILI)	17-24, 26-28	25, 29, 30
Chikungunya	None	None	Injury	None	None
Dengue	None	None	Neurological	None	28, 29
Encephalitis	None	None	Rash	None	18, 19, 29
Malaria	None	None	Respiratory	18-20, 26-28	4, 17, 21, 29
Zika Infection	None	None	Shock/Coma	11	15, 29
Gastrointestinal Illnesses	None	None	Other Illness	27	17, 28
General Enterics ²	None	None			
Vomit and Diarrhea	15, 18, 26-28	17, 19			

¹ Varicella, Measles, Mumps, Rubella, Diphtheria, Tetanus, Pertussis, Polio

² Cryptosporidium, cyclospora, shigellosis, shigella, salmonellosis, salmonella, ciguatera, campylobacteriosis, cholera, E. coli, and vibrio

During the month of December, Influenza and ILI activity has continued to increase and is well above the national baseline. Flu season is here, but peak activity is yet to come. So far in Florida, influenza A (H3) has been the most common influenza subtype reported to the CDC. There were no positive influenza tests detected by the Bureau of Public Health Laboratories in recent weeks in Broward County. Broward influenza activity remains sporadic.

Figure 2. ESSENCE ILI Visits, Broward, 2017-2018

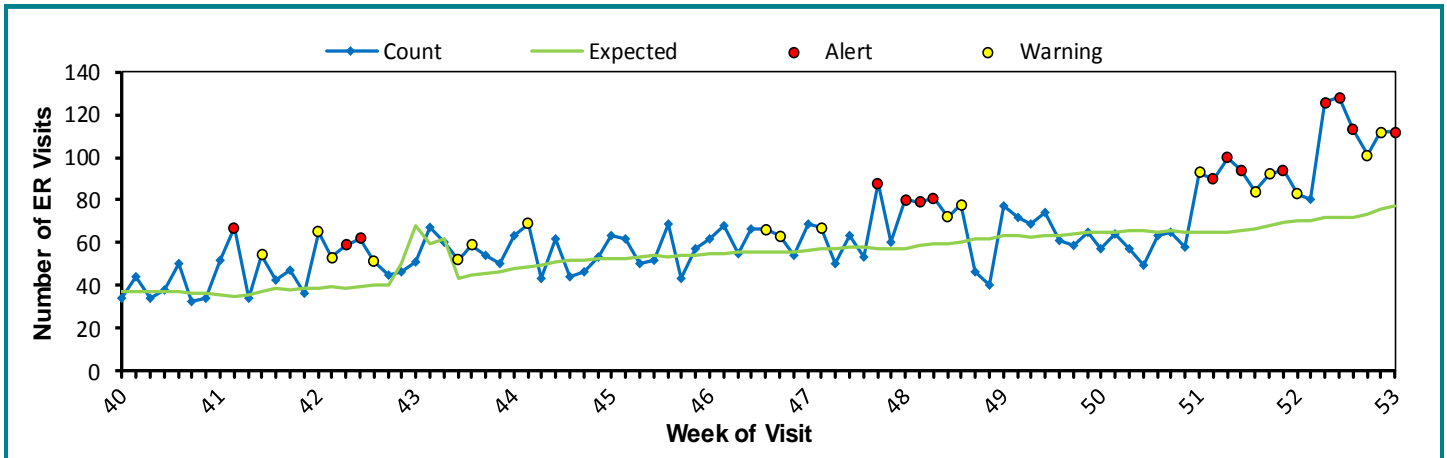


Figure 3. ESSENCE Reported ILI Visits, Broward, 2017

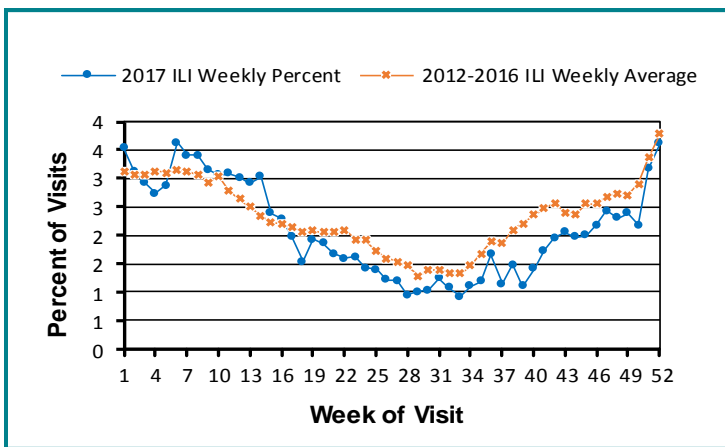
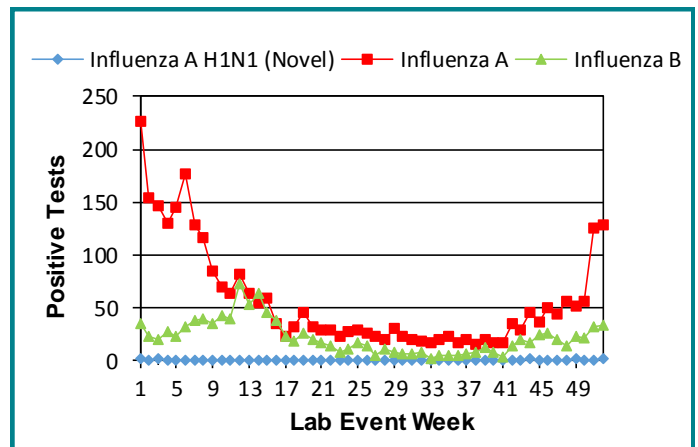


Figure 4. Merlin Reported Circulating Flu Types, Broward, 2017



Summary of Influenza and Respiratory Diseases Data

The number of visits to the emergency department for ILI was higher than previous weeks and was well above the number of expected visits at this time for the month of December (week 48 to week 52) with eight alerts and six warnings (Fig. 2). The percentage of emergency department visits due to ILI was increasing, and is at similar levels when compared to the weekly average for the last five years (Fig. 3). According to Merlin Flu Lab Reports, the number of positive tests for Influenza A has continued to increase. Positive results for Influenza B were increasing, compared to the month of November (Fig. 4).

Influenza Prevention Recommendations

Florida Department Health in Broward County recommends that everyone take precautions to prevent the spread of influenza. The flu is a contagious disease, caused by the influenza virus, and spreads to others when infected persons cough, sneeze or talk. Common symptoms of the flu include: fever (usually high), headache, extreme tiredness, cough, sore throat, runny or stuffy nose, muscle aches, nausea, vomiting, and diarrhea (more common among children than adults). Influenza vaccines have protected millions of people safely for decades. The CDC recommends an annual flu vaccine as the first and best way to protect against influenza. This recommendation is the same even during years when the vaccine composition (the viruses the vaccine protects against) remains unchanged from the previous season. Everyone 6 months and older is encouraged to get vaccinated against the flu even if they got vaccinated last season.

Other recommendations include:

- Wash your hands often with soap and water or an alcohol-based hand sanitizer.
- Avoid touching your eyes, nose, or mouth.
- Stay home when you are sick, keep sick children home and check with a health care provider, as needed.
- Do not share eating utensils, drinking glasses, towels or other personal items.
- Avoid close contact with people who are sick, if possible.



Test and Treat, Broward County, 2017

Test and Treat Program Totals as of: May 1st, 2017 - December 31st, 2017		
TOTAL NUMBER REFERRED TO TEST AND TREAT	770	
Total Enrolled:	679	88%
Newly diagnosed:	303	45%
Previous positives:	376	55%
REFUSED:	28	4%
Total on ART:	617	91%
Total not on ART:	62	9%
INELIGIBLE:	63	8%
Jail	5	8%
OOJ	46	73%
Negative	7	11%
Deceased	5	8%
December 1st, 2017 - December 31st, 2017		
TOTAL NUMBER OF REFERRED TO TEST AND TREAT	81	
Total Enrolled:	77	95%
Newly diagnosed:	38	49%
Previous positives:	37	48%
REFUSED:	2	2%
Total on ART:	67	83%
Total not on ART:	10	12%
INELIGIBLE:	0	0%