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EPI EXAMINER

A Monthly Epidemiology Report

September, 2016

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Disease Summary:

In September 2016, a total of 429 cases of various diseases were reported to the Florida Department of Health in Broward County (DOH-Broward). Among them, there were nine cases of Shiga-toxin producing *E. coli* infection, five cases of acute hepatitis B, two cases of acute hepatitis C, three cases of ciguatera fish poisoning, four cases of Lyme disease, fourteen cases of possible rabies exposure, and twenty-one cases of Zika virus disease and infection (non-congenital). These were higher than the averages of the same month in the previous five years.

Food Recalls:

There were two food recalls reported in Florida for the month of September 2016.

Brand Name	Food	Recall Date	Health Risk
Ashers Chocolates/ Lewinston Inc.	Various Chocolate Candy Products	09/02/2016	Salmonella
Island Soups Company, Inc.	Six Varieties of Island Soups Brand Products	09/07/2016	Clostridium botulinum

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

Table 1 . Provisional Cases* of Selected Notifiable Disease, Broward County, Florida, September 2016

	BROWARD COUNTY					FLORIDA				
	September			Cumulative (YTD)		September			Cumulative (YTD)	
	2016	2015	Mean†	2016	2015	2016	2015	Mean†	2016	2015
A. Enteric Infections										
Campylobacteriosis	14	18	16.6	109	153	271	283	238.6	2742	2775
Cryptosporidiosis	6	16	6	17	43	92	149	154.4	416	690
E.Coli, Shiga-Toxin Producing Infection**	9	6	3	49	35	54	43	45	486	339
Giardiasis, Acute	8	6	7.6	63	56	90	113	111	863	778
Salmonellosis	61	65	57	385	375	834	824	825.4	4429	4434
Shigellosis	7	10	8.8	98	69	93	151	151.6	676	1656
B. CNS Diseases & Bacteremias										
Streptococcus Pneumoniae Invasive Disease, < 6 years old										
Drug Resistant	0	0	0.4	3	3	0	4	4	20	29
Drug Susceptible	2	2	0.8	6	3	6	3	4.2	37	27
C. Viral Hepatitis										
Hepatitis A	1	1	1	5	3	11	8	14	90	89
Hepatitis B, Acute	5	0	0.6	34	19	62	43	34.6	495	380
Hepatitis B, Surface Antigen in Pregnant Women	10	3	7.2	54	31	33	37	38.8	319	346
Hepatitis C, Acute	2	0	0.6	20	4	18	15	16.6	210	132
D. Vector Borne, Zoonoses										
Chikungunya Fever	1	1	1.6	5	23	1	12	15.4	12	113
Ciguatera Fish Poisoning	3	0	0	4	1	6	15	6.4	15	38
Dengue Fever	3	0	0.8	13	5	10	4	15.4	60	35
Lyme Disease	4	1	0.4	17	6	46	26	19.6	290	138
Rabies, Possible Exposure	14	0	0.8	81	4	270	228	210	2433	2507
Zika Virus Disease and Infection, Non-Congenital	21	0	0	131	0	162	0	0	801	0
E. Others										
Legionellosis	4	3	1.6	17	24	46	31	26.2	236	231
Varicella (Chickenpox)	5	12	2.4	46	35	60	93	63.6	590	584

* 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 is 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.

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 bio-terrorism 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, September 2016

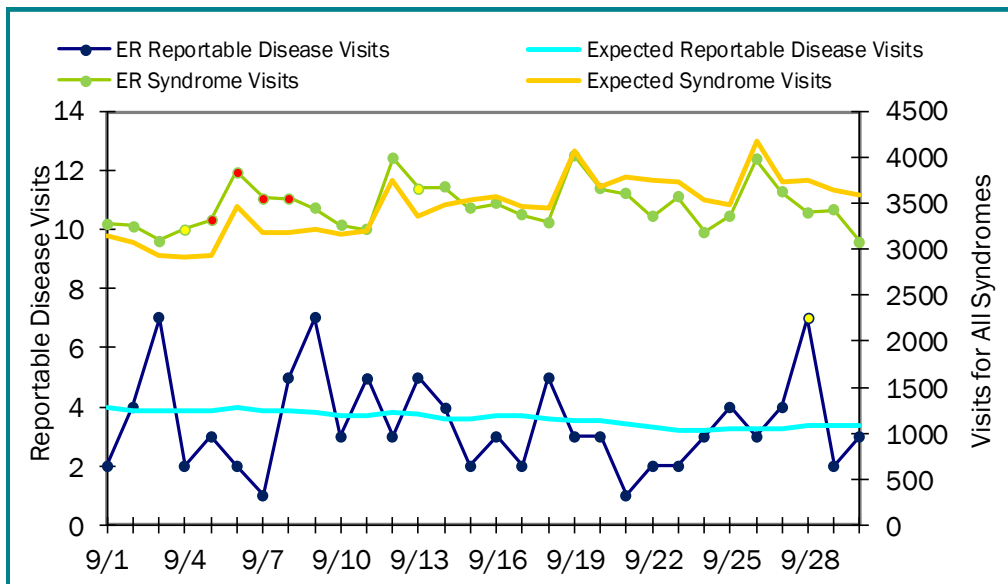


Figure 1. There is one warning and zero alerts for E.R reportable disease visits; and two warnings and four alerts for E.R syndromic visits.
Warning - Yellow data point
Alert - Red data point

Table 2. ESSENCE Chief Complaint Alerts and Warnings for Reportable Disease and Chief Complaint Syndromes, September 2016

Disease	Alert Dates	Warning Dates	Syndrome	Alert Dates	Warning Dates
All Reportable Disease Query	None	28	Botulism-like Illness	15	14
Vaccine Preventable Diseases ¹	None	4, 6	Exposure	None	None
Hepatitis A and B	None	None	Fever	5, 6, 8, 13, 14	7, 11, 12, 15, 18
Meningitis (may not be bacterial)	None	9, 16, 28	Gastrointestinal Illness	6, 7, 8, 12, 13	1, 9
Varicella (chicken pox)	None	18, 19	Hemorrhagic Illness	None	None
Vector Borne Diseases	None	None	Influenza-like Illness (ILI)	2, 3, 4, 8, 9, 10, 12, 13, 14	5, 6, 7, 11, 15
Chikungunya	None	19	Injury	6, 12	13
Dengue	None	None	Neurological	None	None
Encephalitis	None	None	Rash	6	7
Malaria	None	None	Respiratory	4, 5, 6, 7, 8, 12	3, 9, 13, 14
Zika Infection	6	7	Shock/Coma	21	None
Gastrointestinal Illnesses	23, 24	25, 27	Other Illness	None	4, 5, 7, 8, 9, 12, 14
General Enterics ²	23, 24	25, 27			
Vomit and Diarrhea	6, 12, 13, 14	2, 5, 7, 8, 11			

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

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

Influenza activity remains low nationwide. In Florida, Influenza Like Illness (ILI) visits have been increasing statewide. The most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) has been influenza B Yamagata lineage, where influenza A (H3) has been the predominantly circulating strain nationally. There have been no positive influenza tests detected by the Bureau of Public Health Laboratories in recent weeks for Broward County. Broward flu activity is sporadic.

Figure 2. ESSENCE ILI Visits, Broward, 2015-2016

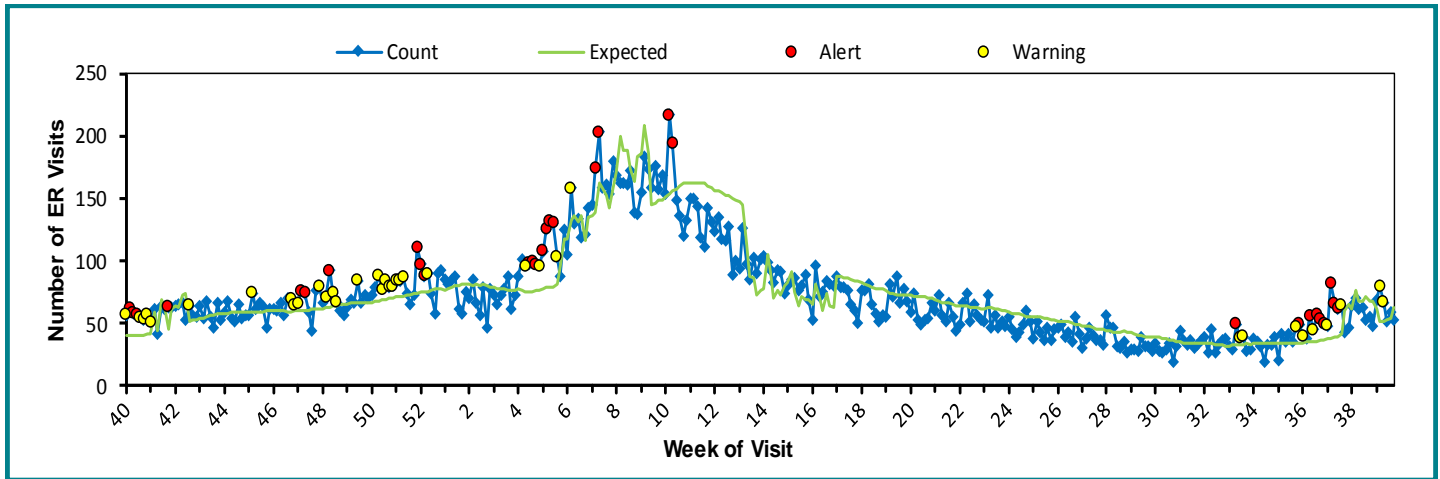


Figure 3. ESSENCE Reported ILI Visits, Broward, 2015-2016

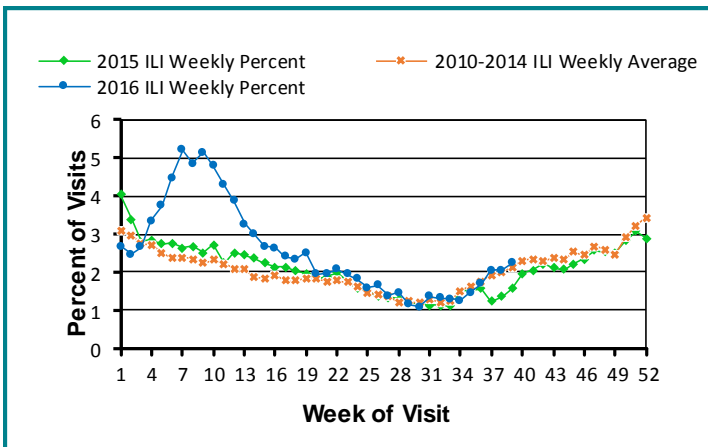
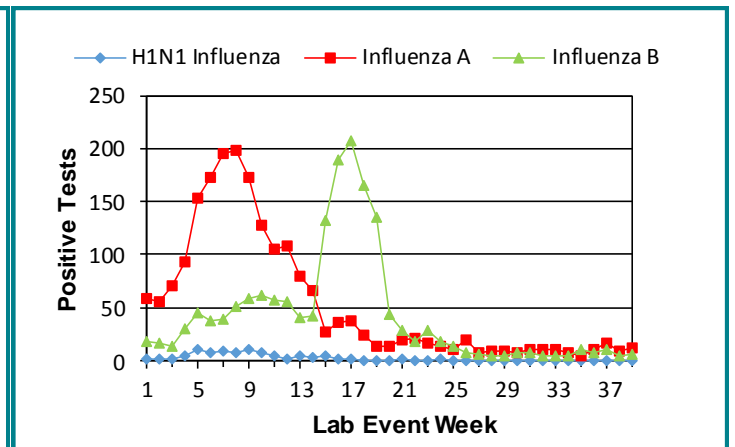


Figure 4. Merlin Reported Circulating Flu Types, Broward, 2016



Summary of Influenza and Respiratory Diseases Data

The number of visits to the emergency department for ILI was increasing for the month of September (week 35 to week 39) with 8 alerts and 7 warnings (Fig. 2). The percentage of emergency department visits due to ILI in September was increasing and following the trend of the 2010-2014 ILI weekly average (Fig. 3). According to Merlin Flu Lab Reports, the number of positive tests for Influenza A was found to be higher than the number of positive tests for Influenza B (Fig. 4). However, collection numbers remain low throughout the state.

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.

