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EPI EXAMINER

A Monthly Epidemiology Report

March, 2017

INSIDE THIS REPORT

Disease Summary.....1	Syndromic Surveillance.....3
Food Recalls.....1	Influenza Surveillance.....4
Merlin Reportable Disease Surveillance.....2	

Disease Summary:

In March, a total of 412 cases of various diseases were reported to the Florida Department of Health in Broward County (DOH-Broward). Among them, there were seven cases of Shiga-toxin producing *E. coli* infection, two cases of hepatitis A, four cases of acute hepatitis B, one case of Lyme disease, thirteen cases of possible rabies exposure, two cases of arsenic poisoning, one case of mercury poisoning, and thirteen cases of varicella (chickenpox). These were higher than the averages of the same month in the previous five years.

Food Recalls:

There were 10 food recalls reported in Florida for the month of March 2017.

Brand Name	Food	Recall Date	Health Risk
Versa Marketing, Inc.	Fusia Szechuan Stir Fry	03/01/2017	Listeria
Soynut Butter Co.	I.M. Healthy Original Creamy Soynut Butter	03/04/2017	E. coli O157:H7
Vulto Creamery	All Soft, Wash-Rind Raw Milk Cheeses	03/07/2017	Listeria
Soynut Butter Co.	Expanded to All I.M. Healthy Soynut Butters and Granola	03/07/2017	E. coli O157:H7
Biery Cheese Company	Expands Recall of Select Cheese	03/08/2017	Listeria
Soynut Butter Co.	Expands Recall to Include Dixie U.S.A Products	03/10/2017	E. coli O157:H7
Vulto Creamery	Expanded to all Raw Milk Cheeses	03/11/2017	Listeria
Advanced Fresh Concepts Franchise Corp.	Edamame Soybeans	03/17/2017	Listeria
EuroCan Manufacturing	Barnsdale Farms Pig Ears	03/20/2017	Salmonella
Pro Sports Club	Yogurt Peanut Crunch Bar	03/24/2017	E. coli O157:H7

All data are provisional.

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

	BROWARD COUNTY					FLORIDA				
	March		Mean†	Cumulative (YTD)		March		Mean†	Cumulative (YTD)	
	2017	2016		2017	2016	2017	2016		2017	2016
A. Enteric Infections										
Campylobacteriosis	13	11	12.2	46	34	316	270	217.4	926	811
Cryptosporidiosis	3	2	1.6	10	4	30	35	33.6	76	120
E.Coli, Shiga-Toxin Producing Infection**	7	6	1.6	16	13	56	47	36.8	144	141
Giardiasis, Acute	8	5	5.2	18	17	85	89	80.6	252	238
Salmonellosis	28	23	23.2	101	84	284	290	265.4	852	934
Shigellosis	12	12	20.6	25	23	94	51	131.8	222	186
B. CNS Diseases & Bacteremias										
H. Influenzae Invasive Disease, < 5 years old	1	1	0.6	1	1	6	3	3.8	11	6
Meningococcal Disease	1	1	0.6	1	1	2	3	4.8	9	5
Streptococcus Pneumoniae Invasive Disease, < 6 years old:										
Drug Resistant	1	0	0.8	2	1	5	2	5.6	12	9
Drug Susceptible	0	0	0.2	3	1	3	1	4.6	13	12
C. Viral Hepatitis										
Hepatitis A	2	0	0	5	1	29	6	9.2	55	24
Hepatitis B, Acute	4	1	1	15	7	61	41	30.6	155	139
Hepatitis B, Pregnant Women	16	4	7.8	33	12	56	40	46.2	125	107
Hepatitis C, Acute	2	1	0.6	3	3	22	16	16.4	69	64
D. Vector Borne, Zoonoses										
Lyme Disease	1	0	0	4	3	50	10	5.8	155	27
Rabies, Possible Exposure	13	2	1.4	49	3	297	268	228	752	693
Zika Virus Disease and Infection, Non-Congenital	4	12	2.4	23	18	31	48	9.6	135	92
E. Others										
Arsenic Poisoning	2	0	0.2	2	0	3	0	0.6	3	2
Carbon Monoxide Poisoning	1	1	0.4	2	1	14	12	21.2	46	63
Creutzfeldt-Jakob Disease (CJD)	1	0	0.6	3	0	5	1	2.4	9	2
Lead Poisoning	8	3	3.2	24	12	89	60	98.8	208	144
Mercury Poisoning	1	0	0	3	0	1	1	0.6	9	5
Mumps	1	1	0.4	2	1	6	4	1.6	10	6
Varicella (Chickenpox)	13	5	3	33	20	66	62	85.2	195	243

* 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.

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, March 2017

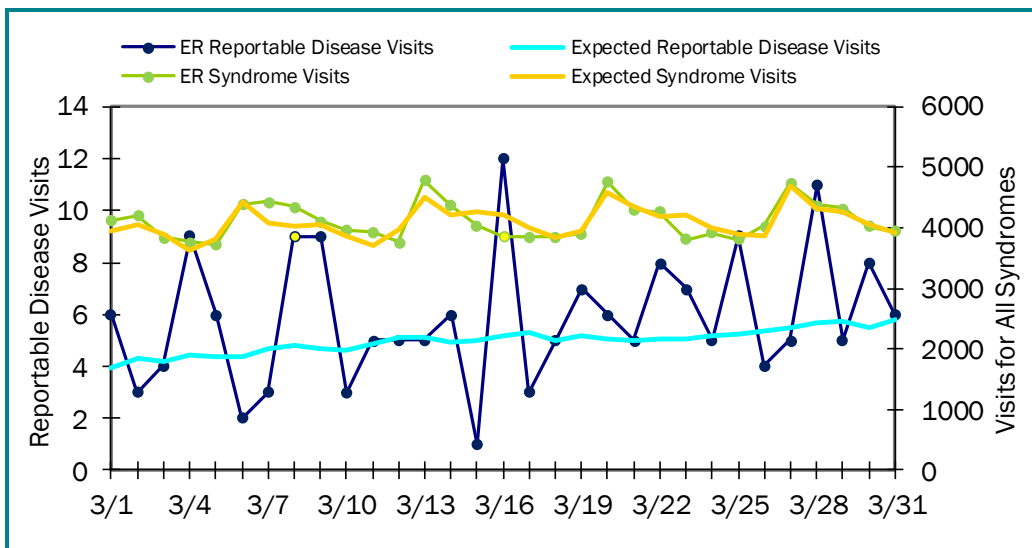


Figure 1. There are one warning and zero alerts for E.R reportable disease visits; and one warning and zero alerts for E.R syndromic visits.

Warning - Yellow data point
Alert - Red data point

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

Disease	Alert Dates	Warning Dates	Syndrome	Alert Dates	Warning Dates
All Reportable Disease Query	None	16	Botulism-like Illness	None	7
Vaccine Preventable Diseases ¹	11	3, 5, 25	Exposure	4	28, 30
Hepatitis A and B	None	None	Fever	7	13, 14, 20, 31
Meningitis (may not be bacterial)	None	9	Gastrointestinal Illness	None	7
Varicella (chicken pox)	None	21, 22, 23	Hemorrhagic Illness	None	None
Vector Borne Diseases	None	None	Influenza-like Illness (ILI)	None	26
Chikungunya	11, 17	None	Injury	2, 4, 9, 10	5, 6, 7, 8, 13
Dengue	None	None	Neurological	None	26, 27
Encephalitis	None	None	Rash	None	None
Malaria	None	None	Respiratory	None	14, 20
Zika Infection	None	None	Shock/Coma	None	19
Gastrointestinal Illnesses	13, 19	None	Other Illness	None	8, 13, 14
General Enterics ²	13, 19	None			
Vomit and Diarrhea	None	27, 28, 29			

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 March, Influenza and ILI activity decreased nationally to levels above those observed in previous seasons at this time. Florida reported widespread Influenza Like Illness (ILI) activity throughout the month with the peak of the season believed to have passed. There were no positive influenza tests detected by the Bureau of Public Health Laboratories in recent weeks in Broward County. Broward influenza activity is sporadic.

Figure 2. ESSENCE ILI Visits, Broward, 2016-2017

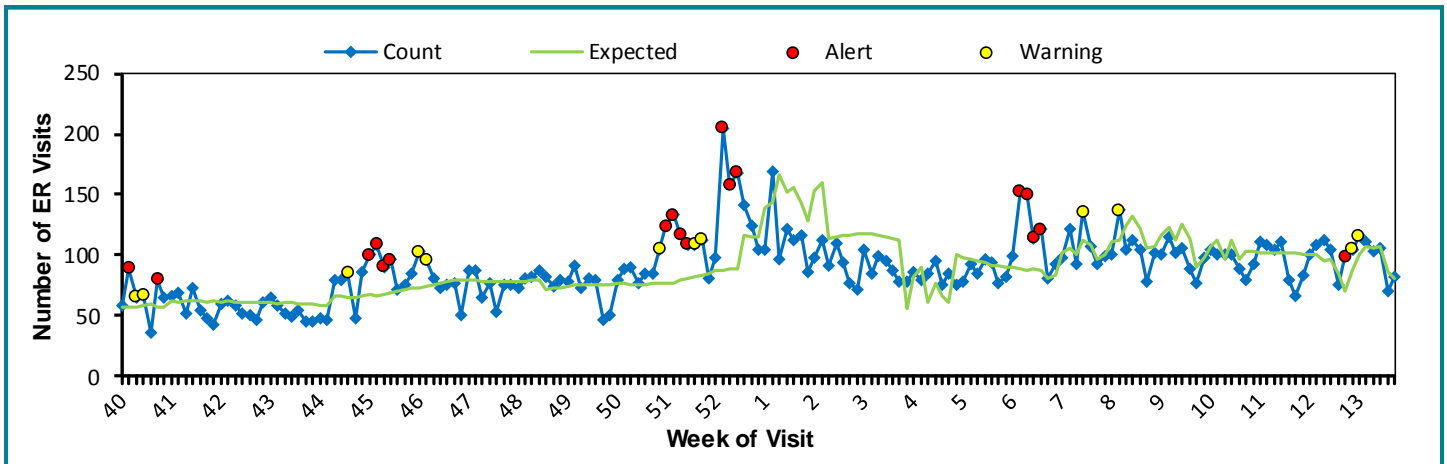


Figure 3. ESSENCE Reported ILI Visits, Broward, 2016-2017

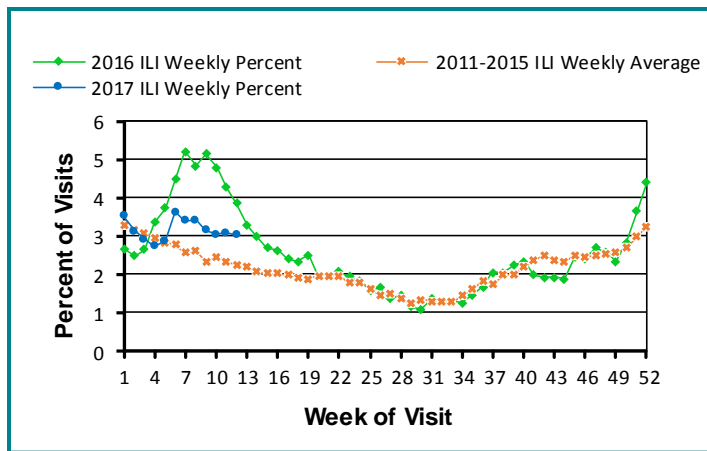
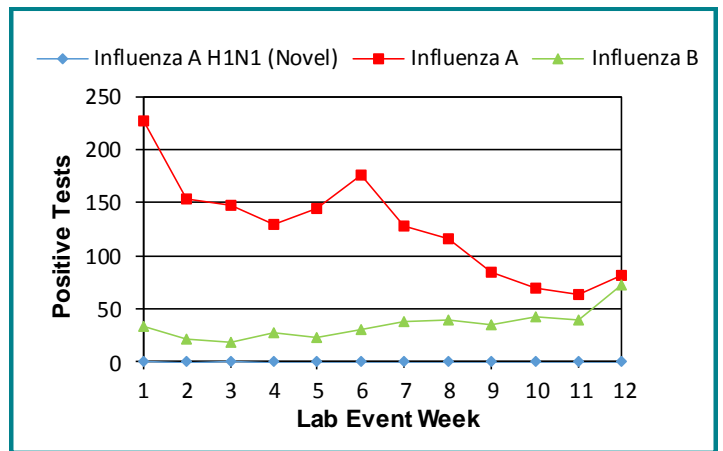


Figure 4. Merlin Reported Circulating Flu Types, Broward, 2017



Summary of Influenza and Respiratory Diseases Data

The number of visits to the emergency department for ILI was plateaued and was similar to the number of expected visits at this time for the month of March (week 9 to week 13) with one alert and two warnings (Fig. 2). The percentage of emergency department visits due to ILI was decreasing, but was above the weekly average for the last five years and significantly lower than this time in 2016 (Fig. 3). According to Merlin Flu Lab Reports, the number of positive tests for Influenza A has been decreasing and exceeded the number of positive tests for Influenza B. As is expected this time of year, Influenza B levels are increasing (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.

