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Tuberculosis	Ext. 5763 or 5735
EPI Examiner	Ext. 5581

EPI EXAMINER

A Monthly Epidemiology Report

February, 2015

INSIDE THIS REPORT

Disease Summary.....	1	Merlin Reportable Disease Surveillance....	4
Food Recalls.....	1	Syndromic Surveillance.....	5
Rubella Update.....	2,3	Influenza Surveillance.....	6

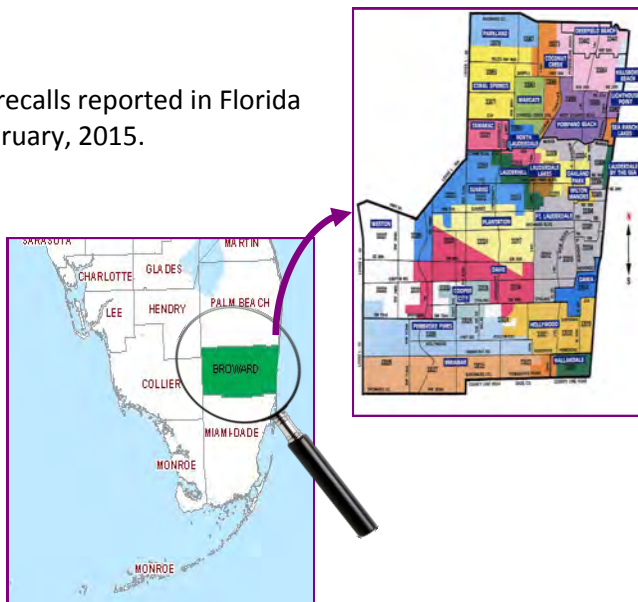
Disease Summary:

In February, 2015, a total of 396 cases of various diseases were reported to the Florida Department of Health in Broward County (DOH-Broward). Three cases of Hepatitis B (Acute), ten cases of Lead Poisoning and one case of Vibriosis (Vibrio Vulnificus) were reported during this period. These were higher than the average of the same month in the previous five years.

Out of the three cases of Hepatitis B (Acute), two were sporadic and one had unknown status. Also, two out of three cases were confirmed and one was acquired in Florida. Out of the ten cases of Lead Poisoning, eight were sporadic and two were outbreak associated. Also, seven out of the ten cases were acquired in Florida and all were confirmed. Further, one case of Vibriosis (Vibrio Vulnificus) reported was confirmed, acquired in Florida and sporadic.

Food Recalls:

There were no food recalls reported in Florida for the month of February, 2015.



Rubella, sometimes called German measles or three-day measles, is a contagious disease caused by a virus. The infection is usually mild with fever and rash.

SYMPTOMS:

Rubella usually causes the following symptoms in children:

- Rash that starts on the face and spreads to the rest of the body
- Low fever (less than 101 degrees)

These symptoms last 2 or 3 days.

Older children and adults may also have swollen glands and symptoms like a cold before the rash appears. Aching joints occur in many cases, especially among young women.

About half of the people who get Rubella do not have symptoms.

COMPLICATIONS:

Birth defects if acquired by a pregnant woman: deafness, cataracts, heart defects, mental retardation, and liver and spleen damage (at least a 20% chance of damage to the fetus if a woman is infected early in pregnancy)

TRANSMISSION:

Spread by contact with an infected person, through coughing and sneezing.

PREVENTION:

Rubella vaccine (contained in MMR vaccine) can prevent this disease.



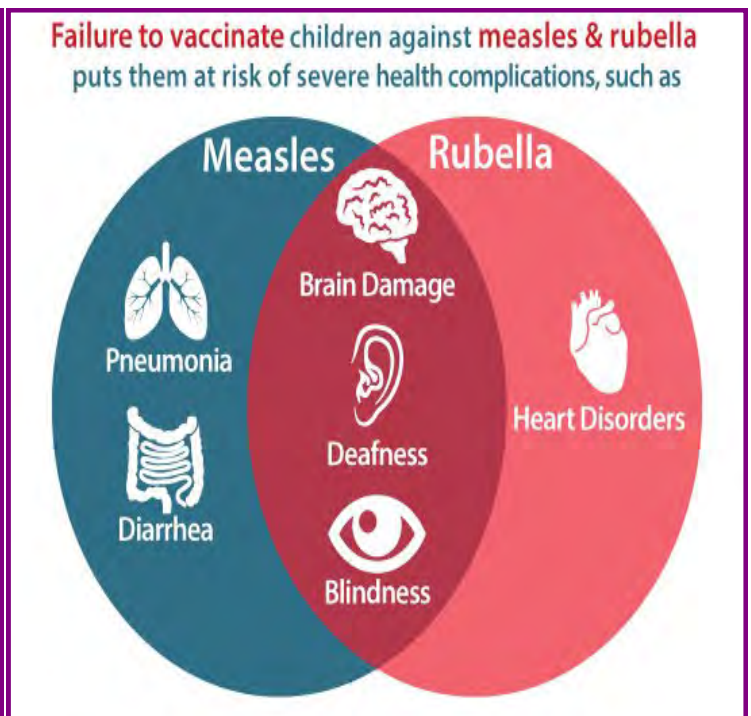
STOP RUBELLA

Make sure every child gets the rubella vaccine

Rubella is a viral infection that spreads in airborne droplets when people sneeze or cough. If a woman gets rubella while pregnant—especially in her first 3 months—serious consequences can result, including miscarriages, fetal deaths, still births, and congenital rubella syndrome (CRS). Rubella virus is an important cause of severe birth defects.

A woman infected with rubella during the first 3 months of pregnancy has up to a **90% chance** of giving birth to a baby with congenital rubella syndrome.

Or her baby may not survive.



On February 23, 2015, the Florida Department of Health in Broward County (DOH-Broward)-Epidemiology Program was notified of a suspected Measles case. On 2/23, the case presented to the clinic with a rash, fever, cough, and conjunctivitis. Specimens were collected for Measles testing and sent to the Bureau of Public Health Laboratories in Jacksonville. DOH-Broward recommended that the patient self-isolated until lab results were available.

The patient tested negative for Measles, but positive for Rubella on 2/27. Epidemiology staff began an investigation to identify individuals potentially exposed to Rubella. Individuals were educated regarding Rubella signs and symptoms, asked about vaccination history, and asked about pregnancy status and potential for pregnancy. In addition, a Provider Letter was sent to all medical providers, urgent care centers and hospitals informing them of the positive Rubella in Broward County.

To date, 1,338 individuals have been identified as being potentially exposed to Rubella. Six hundred and twenty individuals have been reached by the DOH-Broward Epidemiology Program. DOH -Broward followed up with letters to each employee, vendors and hotel staff. Five pregnant females were identified. Four are Rubella immune and one has an appointment with her physician but believes she has been vaccinated. All vendors or contracted staff that was not employed by the original company was also notified via letter and phone calls. All individuals identified have received a letter informing them of their possible exposure to Rubella. DOH-Broward continues to investigate potential exposures as the investigation is on-going.

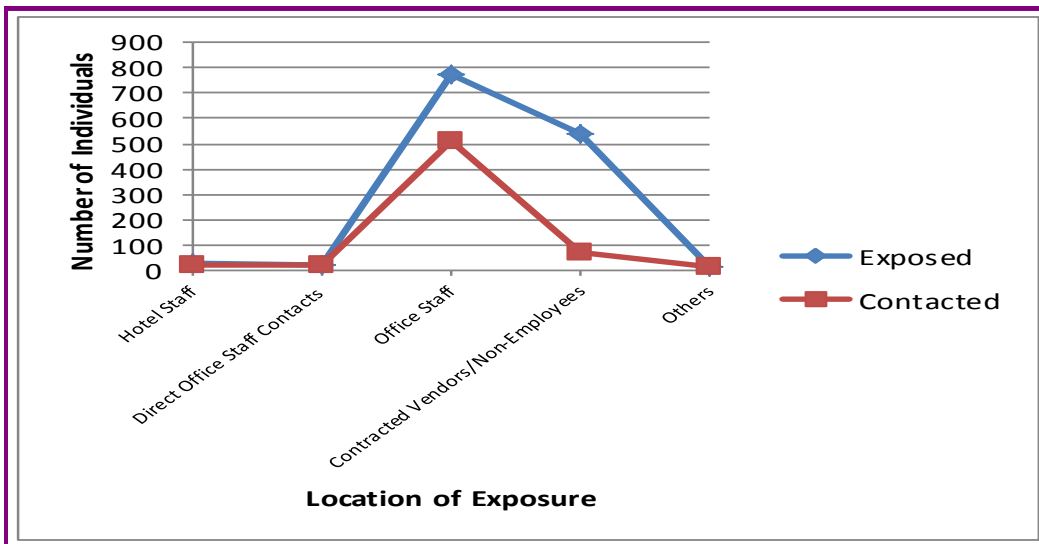


Figure 1: Number of Individuals exposed and contacted, Rubella Investigation, Broward County, February, 2015.

Figure 2: Immune status of individuals exposed, Rubella Investigation, Broward County, February, 2015

Figure 3: Immune status of individuals exposed by location of exposure, Rubella Investigation, Broward County, February, 2015

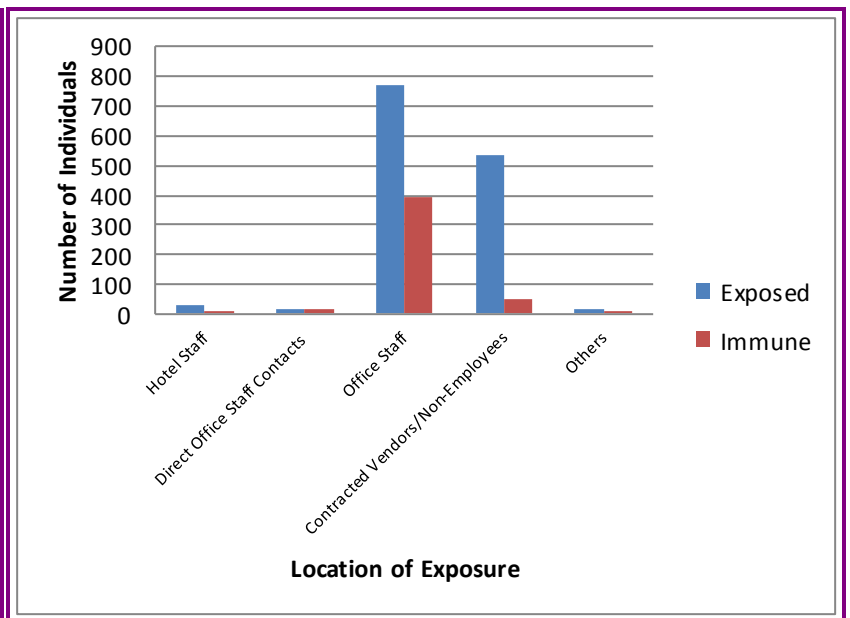
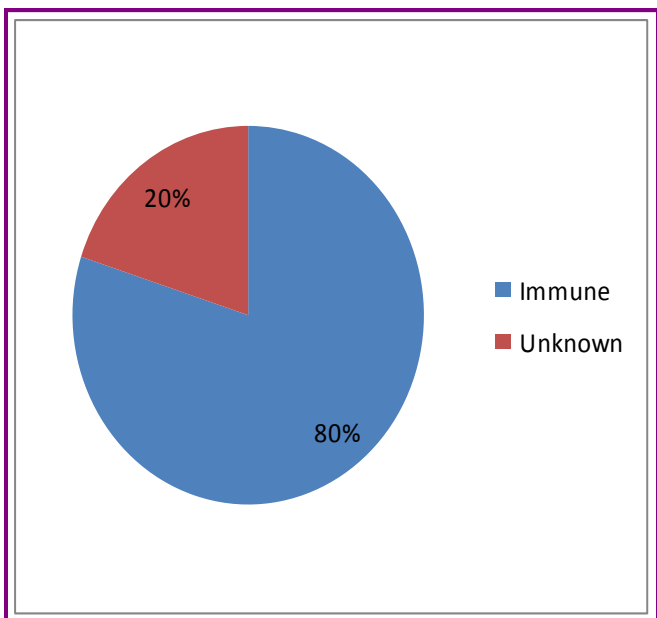


Table 1 . Provisional Cases* of Selected Notifiable Disease, Broward County, Florida, February, 2015

	BROWARD COUNTY					FLORIDA				
	February			Cumulative (YTD)		February			Cumulative (YTD)	
	2015	2014	Mean	2015	2014	2015	2014	Mean†	2015	2014
A. Enteric Infections										
Campylobacteriosis	9	14	10.4	21	35	258	207	153.4	508	431
Cryptosporidiosis	1	3	2	4	7	41	46	34.8	100	82
Cyclosporiasis	0	1	1	0	1	0	1	2.8	0	1
E.Coli, Shiga-Toxin Producing Infection **	1	2	1.6	3	6	44	29	23.8	63	70
Giardiasis	5	5	6.4	11	18	92	65	84.4	163	146
Salmonellosis	14	32	23.2	47	60	232	259	236.4	554	616
Shigellosis	7	44	15.8	11	80	202	149	93.4	268	251
B. CNS Diseases & Bacteremias										
Haemophilus Influenzae Invasive Disease	3	2	1	8	6	12	27	21.4	34	62
Streptococcus Pneumoniae Invasive Disease:										
Drug Resistant	0	4	5	2	7	4	70	67.8	18	124
Drug Susceptible	10	8	7.6	14	14	42	78	74.6	80	145
C. Viral Hepatitis										
Hepatitis B Surface Antigen In Pregnant Women	1	11	4.6	3	25	36	34	35.2	59	75
Hepatitis B, Acute	3	1	1.6	4	2	37	27	22	62	55
D. Vector Borne, Zoonoses										
Chikungunya Fever	4	0	0	12	0	25	0	0	52	0
Dengue Fever	1	0	0.6	2	3	4	8	6.2	7	23
Rabies, Possible Exposure	1	0	0.6	2	0	253	221	180.4	522	406
E. Others										
Legionellosis	2	3	1	4	7	29	13	11.4	49	35
Lead Poisoning	10	2	0.8	13	6	59	113	65.4	106	152
Pertussis	1	2	0.8	2	6	33	45	32.4	56	127
Varicella (Chickenpox)	3	3	1.8	4	3	77	52	70.6	133	94
Vibriosis (Vibrio Vulnificus)	1	0	0	1	0	2	0	0.2	2	0

* 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

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

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

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 bioterrorism threats and reportable diseases. Chief complaint data is transmitted daily to the ESSENCE system from participating hospital emergency rooms. BCHD 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 4. ESSENCE Daily Emergency Department Visits, Broward, February, 2015

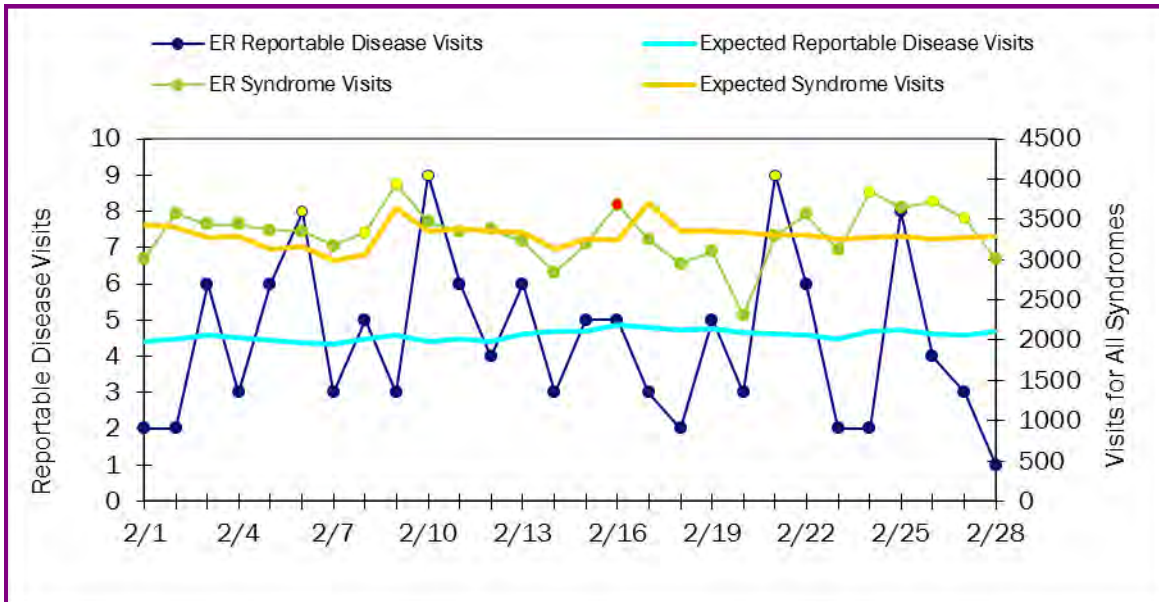


Figure 4. There are two warnings and no alerts for E.R reportable disease visits; and five warnings and one alert for E.R syndromic visits.
Warning - Yellow data point
Alert - Red data point

Table 2. ESSENCE Chief Complaint Alerts and Warnings for Reportable Disease and Chief Complaint Syndromes, February 2015

Disease	Alert Dates	Warning Dates	Syndrome	Alert Dates	Warning Dates
All Reportable Disease Query	None	6, 10, 21	Botulism-like Illness	None	24, 25
Vaccine Preventable Diseases ¹	9, 10	None	Exposure	None	6
Hepatitis A and B	None		Fever*	5, 24, 26	9, 22, 25, 27, 28
Meningitis (may not be bacterial)	None	13, 14	Gastrointestinal Illness	16, 22, 24, 26	21, 25, 27
Varicella (chicken pox)	8	19, 22	Hemorrhagic Illness	9, 12	13, 19
Vector Borne Diseases	None	None	Influenza-like Illness (ILI)*	9	None
Dengue	None	None	Injury	None	4, 7, 9
Encephalitis	None	None	Neurological	26, 27	8, 24, 25
Malaria	None	None	Rash	None	9
Chikungunya	None	None	Respiratory*	9, 10	11, 16
Gastrointestinal Illnesses	9	10, 22	Shock/Coma	None	6, 27
General Enterics ²	9	10, 22	Other Illness	9	None
Vomit and Diarrhea	16, 24, 25, 26	10, 22, 27			

*The increased alerts and warnings of ILI and respiratory symptoms in the syndromic reporting is the result of ongoing flu season.

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 is elevated nationally. In Florida, Influenza and Influenza Like Illness (ILI) continues to decline statewide in all surveillance systems and data suggest that the season peaked in week 52. The most common influenza subtype detected at the Bureau of Public Health Laboratories in recent weeks has been Influenza A (H3). Emergency department visits for ILI is highest in children under 5 and those 65 and older. Broward flu activity is mild.

Figure 5. ESSENCE ILI Visits, Broward, 2014-2015

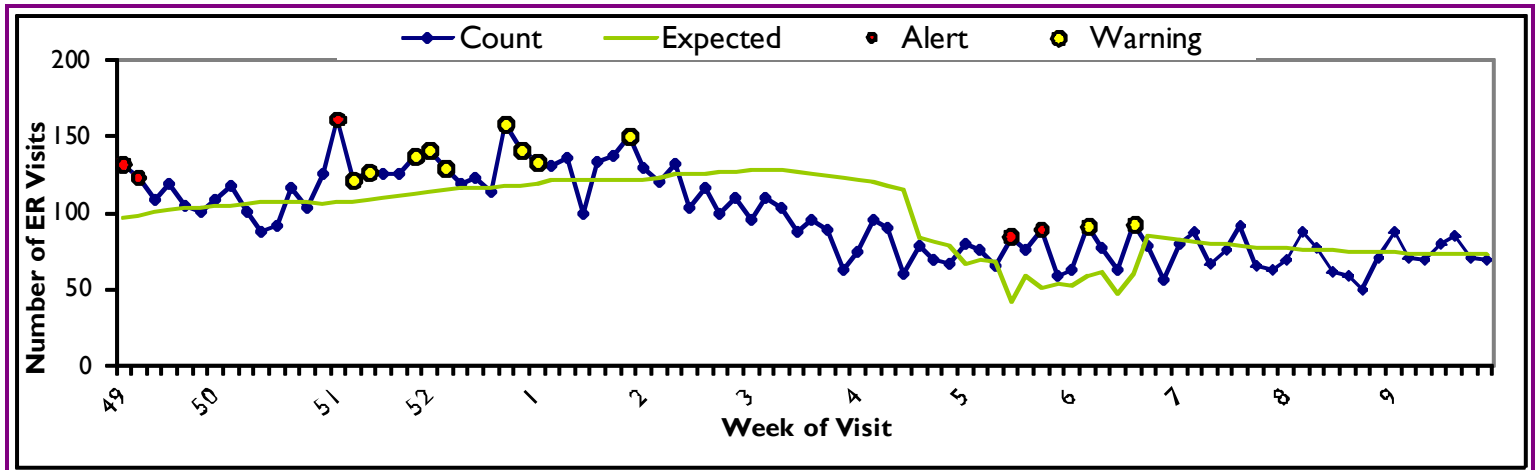


Figure 6. ESSENCE Reported ILI Visits, Broward, 2014-2015

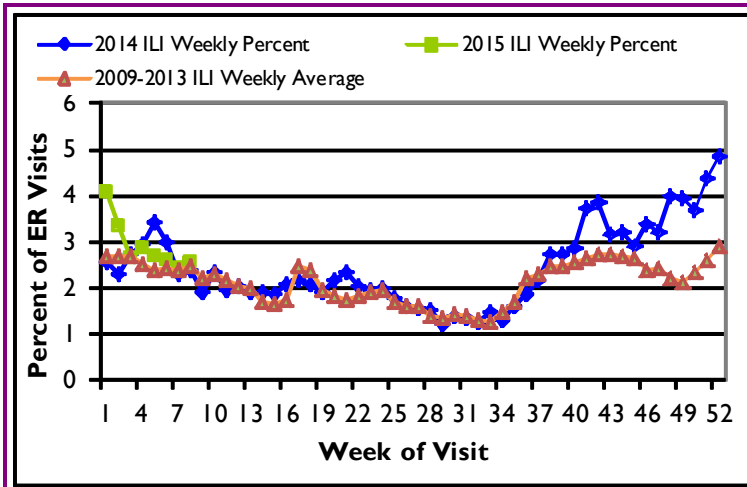
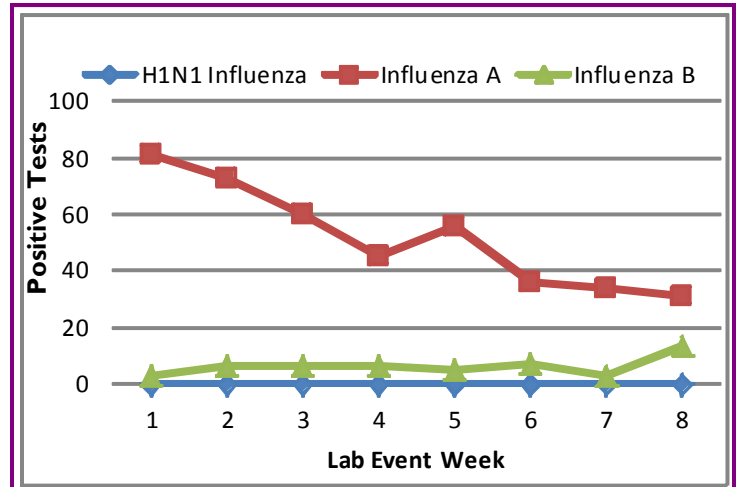


Figure 7. Merlin Reported Circulating Flu Types, Broward, 2015



Summary of Influenza and Respiratory Diseases Data

The number of visits to the emergency department for ILI was slightly elevated for the month of February (week 6 to week 9) with two warnings and no alerts (Fig. 5). The percentage of emergency department visits due to influenza like illness (ILI) was slightly higher than weekly average for the last five years (Fig. 6). According to Merlin—Flu Lab Reports, the number of positive tests for Influenza A was found in majority as compared to other types (Fig. 7).

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.

