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EPI EXAMINER

A Monthly Epidemiology Report

JANUARY, 2015

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Disease Summary:

In January 2015, a total of 394 cases of various diseases were reported to the Florida Department of Health in Broward County (DOH-Broward). One case of Mumps and one case of Vibriosis (*Vibrio Alginolyticus*) were reported during this period. This was higher than the average of the same month in the previous five years. The mumps case was a suspect and it was not associated with an outbreak. Also, it was acquired in the U.S. but not Florida. The Vibriosis (*Vibrio Alginolyticus*) case was confirmed, not associated with an outbreak and acquired in Florida.

Food Recalls:

The following food products were distributed in Florida and are being recalled due to a potential health risk in the month of January 2015:

Brand Name	Food	Recall Date	Health Risk
Eillien's Candies Inc.	Eillien's Walnut Pieces	01/05/2015	Salmonella

Link to Recall: <http://www.fda.gov/Safety/Recalls/ucm429094.htm>

Measles Update

Cheryl Engineer, M.P.H.

On 1/8/15, DOH-Broward was notified of a positive measles case. The case traveled with a group from Azerbaijan to London to Miami and then left for New York City (NYC). They landed in Miami on 12/31/2014 and stayed for four days. During their stay, the group visited a tour company on 1/3/2015 in Hollywood, Broward County. During that day, the tour company had three employees working at the site. A family checked in the office with the owner. Later a group of ten split into three groups of two or three and took the tour ride. No sick contacts were reported. On follow up, one employee was prophylaxed on 1/9/2015. The rest of the contacts were followed up in NYC.

Following is the official letter by the State Epidemiologist & Director of Florida Department of Health reviewing the information on measles following the multistate outbreak.

Mission: To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.

Florida HEALTH

Rick Scott
Governor

John H. Armstrong, MD, FACS
State Surgeon General & Secretary

Vision: To be the Healthiest State in the Nation

February 3, 2015

Dear Colleague:

With the ongoing multistate measles outbreak, it is imperative to review what we know about this highly infectious but vaccine-preventable disease since most clinicians have never seen a case. While there have been no confirmed measles cases in Florida residents, we have seen confirmed cases in visitors, some of whom were evaluated by Florida healthcare providers but not tested or diagnosed.

Measles is a highly contagious disease, transmitted by respiratory aerosols when an infected person coughs or sneezes. The virus can live for up to two hours on surfaces or in an airspace where the infected person coughed or sneezed. The incubation period ranges from 7-21 (average 10-12) days and an individual can pass the virus to others before feeling ill. The prodromal signs and symptoms of measles include: fever, malaise, coryza, cough, conjunctivitis, and the pathognomonic enanthema—Koplik spots—on the oral mucosa. Please note: the presence of Koplik spots confirms measles, but the absence of Koplik spots does not rule it out, as it is present in only a small percentage of cases.

An erythematous maculopapular rash typically appears ~3 days after onset of illness and the ill person continues to be infectious for about 4 days after rash appears. The rash initially appears behind the ears and on the forehead, spreading down the neck, upper extremities, trunks, and lower extremities (including palms and soles). Rash may last for 5-7 days before fading. Complications from measles may include: otitis media, bronchopneumonia, laryngotracheobronchitis, diarrhea, acute encephalitis, and death. The attached document and following link provide an overview of what a patient infected with measles looks like, www.cdc.gov/measles/about/photos.html.

Please isolate and report suspect measles cases to the county health department immediately (www.floridahealth.gov/CHDEpiContact and www.floridahealth.gov/DiseaseReporting). For patients presenting with fever, rash and other symptoms, consider measles in your differential and inquire about MMR vaccine status, recent international travel, and exposure to a person with febrile rash illness. Collect serum, nasopharyngeal swab, and clean catch urine sample for IgM or RNA from suspect patients and isolate them until four days after the onset of rash while awaiting laboratory results. Local health department staff will conduct a contact investigation and provide guidance as needed.

Remember, the best way to prevent the spread of measles is to ensure full MMR vaccine coverage in our community. Identify and offer vaccine to patients that have not received the full series (www.cdc.gov/measles). Thank you for your help in keeping our community safe and healthy!

Sincerely,
Anna M. Likos, MD, MPH
Anna Marie Likos, MD, MPH
State Epidemiologist and Director,
Division of Disease Control & Health Protection

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Florida HEALTH

Think Measles

1. IDENTIFY

Suspect measles in patients with:

- Fever and rash.
- History of international travel or contact with visitors from locations with known measles outbreaks in the past 3 weeks.
- No or unknown MMR vaccine status. History of MMR vaccine does not exclude a measles diagnosis.



This is the skin of a patient after 3 days of measles infection.
Photo courtesy of the CDC.



Head and shoulders of boy with measles; third day of rash.
Photo courtesy of the CDC.



2. ISOLATE

- Implement airborne infection control precautions, mask and isolate patient in a negative pressure room, if available.
- Permit only staff immune to measles to be near the patient.
- Collect nasopharyngeal swab, urine, and serum for measles IgG, IgM and PCR.



3. INFORM

Immediately report ALL suspected measles infections to your county health department. Notify other facilities of suspected measles before transport.

Florida Department of Health in Broward County
247 Disease Reporting 954-734-3046



Vaccination Protects Against Measles

A single dose is 93% effective and two doses are 97% effective.

Risk Factors

- History of international travel, contact with international travelers, or domestic travel to locations with known measles outbreaks.
- No or unknown MMR vaccine status. History of MMR vaccine does not exclude a measles diagnosis.
- Contact with a person that had a febrile rash illness.

Prodrome

- Fever, cough, coryza, conjunctivitis

Rash Onset

- Fever spikes, often up to 104°F.
- Red, maculopapular rash that may become confluent—typically starts at hairline, then face and spreads down body.
- The rash may be difficult to see on darker skin.
- Koplik's spots (small, red, irregularly-shaped spots with blue-white centers found on the oral mucosa) may be present in a small number of cases.

Following is the algorithm used to identify and manage suspected cases of measles:

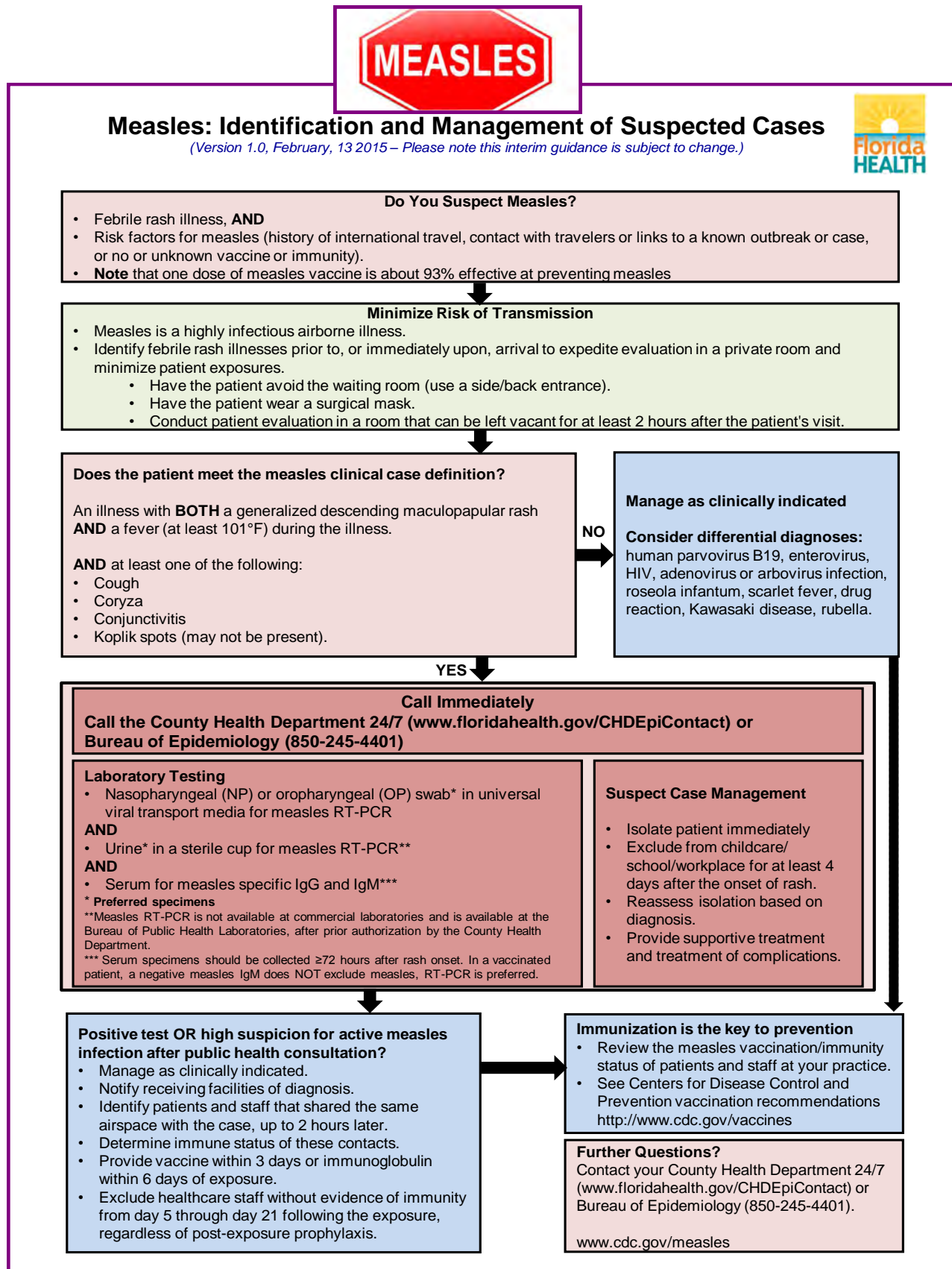


Table 1 . Provisional Cases* of Selected Notifiable Disease, Broward County, Florida, January, 2015

	BROWARD COUNTY					FLORIDA				
	January			Cumulative (YTD)		January			Cumulative (YTD)	
	2015	2014	Mean	2015	2014	2015	2014	Mean†	2015	2014
A. Enteric Infections										
Campylobacteriosis	12	21	13.6	12	21	250	224	157.8	250	224
Cryptosporidiosis	3	4	2.2	3	4	59	36	28.8	59	36
E.Coli, Shiga-Toxin Producing Infection**	2	4	1.8	2	4	20	41	25.8	20	41
Giardiasis	6	13	9.4	6	13	72	81	101.4	72	81
Salmonellosis	33	28	25	33	28	322	357	300.8	322	357
Shigellosis	4	36	11	4	36	66	102	80.6	66	102
B. CNS Diseases & Bacteremias										
Haemophilus Influenzae Invasive Disease	5	4	3	5	4	22	35	23	22	35
Meningitis, Bacterial Or Mycotic	0	2	1.6	0	2	12	13	13.8	12	13
Meningococcal Disease	0	2	1.4	0	2	3	6	6	3	6
Streptococcus Pneumoniae Invasive Disease:										
Drug Resistant	2	3	7.4	2	3	14	54	78.8	14	54
Drug Susceptible	4	6	7.4	4	6	38	67	81	38	67
C. Viral Hepatitis										
Hepatitis B Surface Antigen In Pregnant Women	2	14	4.2	2	14	23	41	34.8	23	41
Hepatitis B, Acute	1	1	1	1	1	26	30	24.6	26	30
D. Vector Borne, Zoonoses										
Chikungunya Fever	8	0	-	8	0	27	0	-	27	0
Dengue Fever	1	3	1.6	1	3	4	15	9	4	15
Rabies, Possible Exposure	1	0	0.6	1	0	270	185	152.8	270	185
Malaria	4	0	2	4	0	6	3	9	6	3
E. Others										
Carbon Monoxide Poisoning	2	4	2.4	2	4	20	18	16.6	20	18
Legionellosis	2	4	2.6	2	4	20	22	17.6	20	22
Lead Poisoning	3	4	1.2	3	4	48	39	44.8	48	39
Mumps	1	0	0	1	0	2	1	1	2	1
Pertussis	1	4	1.6	1	4	23	82	34.8	23	82
Varicella (Chickenpox)	1	0	2	1	0	56	42	61.8	56	42
Vibriosis (Vibrio Alginolyticus)	1	0	0	1	0	2	2	0.6	2	2

* 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. Florida Department of health in Broward County 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, January 2015

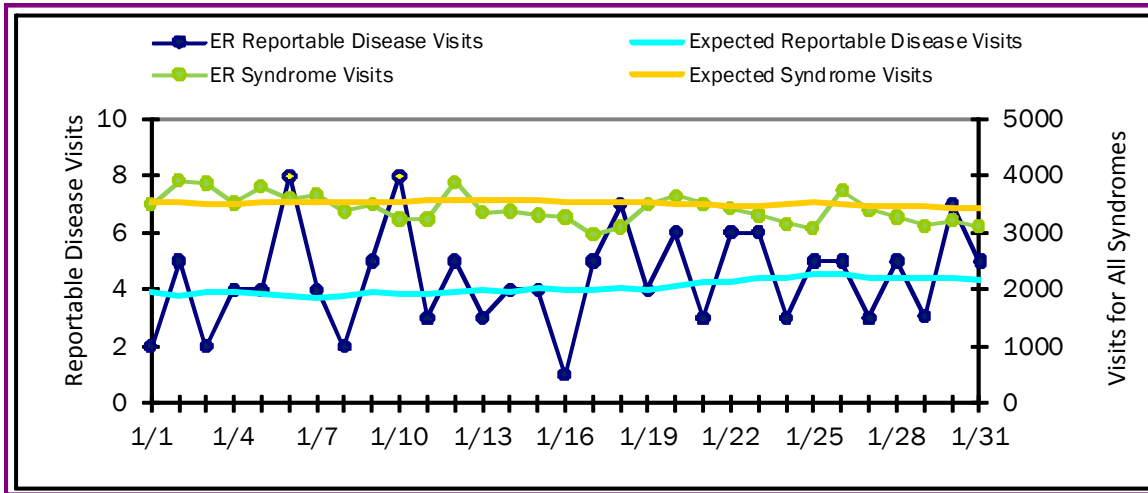


Figure 1. There are two warning and no alerts for E.R reportable disease visits; and no warnings or alerts for E.R syndromic visits .

Warning - Yellow data point
Alert - Red data point

Table 1. ESSENCE Chief Complaint Alerts and Warnings for Reportable Diseases and Chief Complaint Syndromes, January, 2015

Disease	Alert Dates	Warning Dates	Syndrome	Alert Dates	Warning Dates
All Reportable Disease Query	None	6, 10	Botulism-like Illness	5, 7	3
Vaccine Preventable Diseases ¹	8	None	Exposure	None	2, 23, 30, 31
Hepatitis A and B	None	6, 20	Fever*	None	None
Meningitis (may not be bacterial)	10, 12	15	Gastrointestinal Illness	None	12
Varicella (chicken pox)	None	None	Hemorrhagic Illness	None	None
Vector Borne Diseases	None	19	Influenza-like Illness (ILI)*	28	3
Dengue	None	None	Injury	None	3
Encephalitis	None	None	Neurological	None	None
Malaria	None	None	Rash	2, 3	1, 4
Chikungunya	None	None	Respiratory*	None	None
Gastrointestinal Illnesses	18	27	Shock/Coma	22	21, 26, 29
General Enterics ²	18	27	Other Illness	None	26
Vomit and Diarrhea	None	None			

*The increased alerts and warnings of ILI 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 Surveillance

Chantal Hall, M.P.H.

Influenza activity is elevated nationally. In Florida, influenza activity remains widespread. It has continued to decline in some surveillance systems and it appears that the season has peaked. 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 Influenza Like Illness (ILI) is highest in children under 5 and those 65 and older. Broward flu activity is mild.

Figure 2. ESSENCE ILI Visits, Broward, 2014-2015

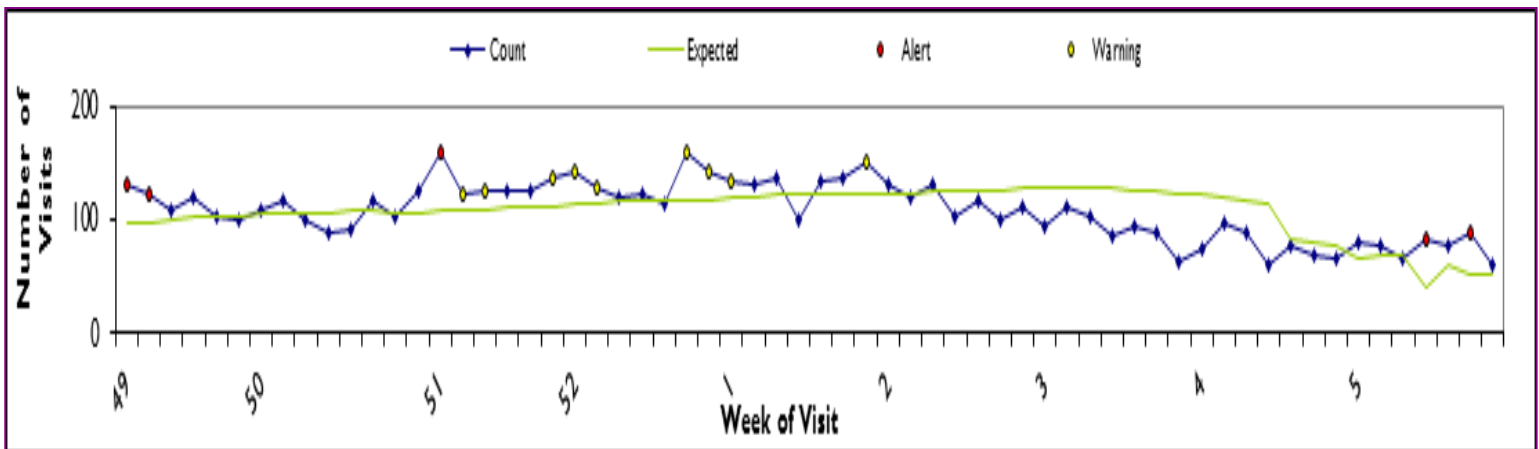


Figure 3. ESSENCE Reported ILI Visits, Broward, 2014-2015

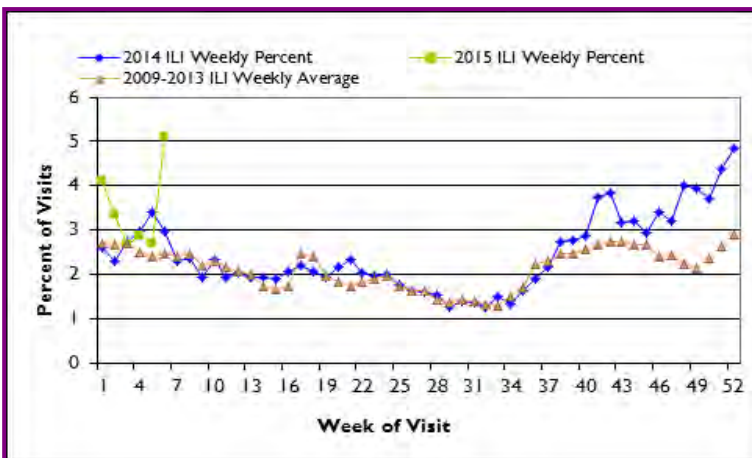
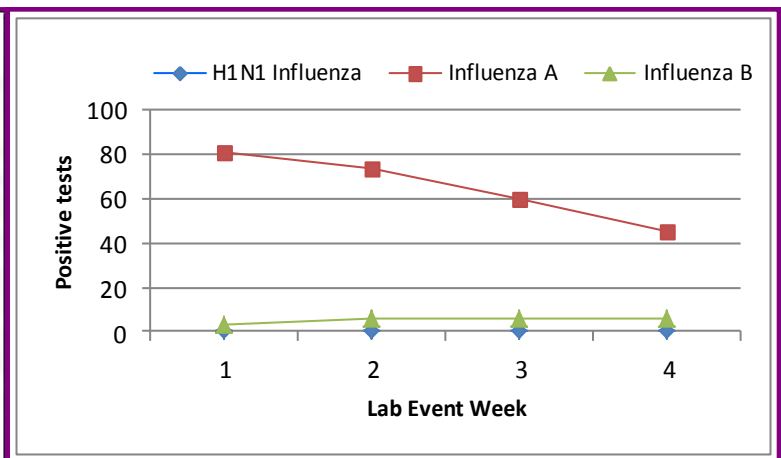


Figure 4. Merlin Reported Circulating Flu Types, Broward, 2015



Summary of Influenza and Respiratory Diseases Data

The number of visits to the emergency department for ILI was slightly elevated for the month of January (week 1 to week 5) with several warnings and alerts (Fig. 2). The percentage of emergency department visits due to ILI was slightly higher than normal for this time of year

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.

