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Tuberculosis	Ext. 5763 or 5735
EPI Examiner	Ext. 5581

EPI EXAMINER

A Monthly Epidemiology Report

March, 2015

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Disease Summary:

In March, 2015, a total of 453 cases of various diseases were reported to the Florida Department of Health in Broward County (DOH-Broward). Two cases of Creutzfeldt-Jacob Disease (CJD), three cases of Legionellosis, six cases of pertussis and one case of Vibriosis (other Vibrio species) were reported during this period. These were higher than the average of the same month in the previous five years.

Out of the two cases of Creutzfeldt-Jacob Disease (CJD), both were sporadic, acquired in Florida and one of them was a confirmed case. Out of the three cases of Legionellosis, all were sporadic, confirmed and all were acquired in Florida. Out of the six cases of Pertussis, two were sporadic and four were outbreak associated. Also, all were acquired in Florida and four of them were confirmed.

Food Recalls:

There were six food recalls reported in Florida for the month of March, 2015.

Brand Name	Food	Recall Date	Health Risk
Superior Foods	Simply Balanced 10 oz Frozen Organic Chopped Spinach	03/24/2015	Listeria Monocytogenes
La Terra Fina	Organic Spinach Dip	03/24/2015	Listeria Monocytogenes
Blue Bell Ice Cream	Blue Bell Ice cream cups 3 oz size	03/23/2015	Listeria Monocytogenes
Amy's Kitchen	Amy's Kitchen Various Products	03/22/2015	Listeria Monocytogenes
Trader Joes	Trader Joes Raw Walnuts	03/17/2015	Salmonella
Frontier Coop	Organic Garlic Powder	03/16/2015	Salmonella

Pertussis, a respiratory illness commonly known as whooping cough, is a very contagious disease caused by a type of bacteria called *Bordetella pertussis*. These bacteria attach to the cilia (tiny, hair-like extensions) that line part of the upper respiratory system. The bacteria release toxins, which damage the cilia and cause inflammation (swelling).

SYMPTOMS:

The disease usually starts with cold-like symptoms and maybe a mild cough or fever. After 1 to 2 weeks, severe coughing can begin that can continue for several weeks. In infants, the cough can be minimal or not even there. Infants may have a symptom known as "apnea." Pertussis can cause violent and rapid coughing, over and over, until the air is gone from the lungs and you are forced to inhale with a loud "whooping" sound. This extreme coughing can cause you to throw up and be very tired.

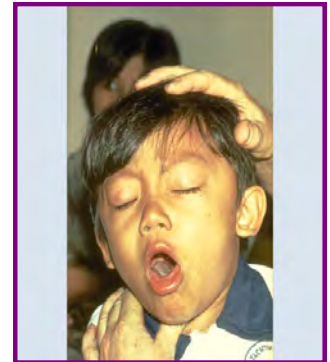
Early symptoms can last for 1 to 2 weeks and usually include:

- Runny nose
- Low-grade fever (generally minimal throughout the course of the disease)
- Mild, occasional cough

Apnea — a pause in breathing (in infants)

As the disease progresses, the traditional symptoms of pertussis appear and include:

- Paroxysms (fits) of many, rapid coughs followed by a high-pitched "whoop"
- Vomiting (throwing up)
- Exhaustion (very tired) after coughing fits



Source: <http://www.immunize.org/photos/pertussis-photos.asp>

TRANSMISSION:

People with pertussis usually spread the disease by coughing or sneezing while in close contact with others, who then breathe in the pertussis bacteria. Symptoms of pertussis usually develop within 5–10 days after being exposed, but sometimes not for as long as 3 weeks.

While pertussis vaccines are the most effective tool we have to prevent this disease, no vaccine is 100% effective. If you have been vaccinated, the infection is usually less severe. If you or your child develops a cold that includes a severe cough or a cough that lasts for a long time, it may be pertussis. The best way to know is to contact your doctor.

TREATMENT AND MANAGEMENT:

Pertussis is generally treated with antibiotics and early treatment is very important.

Manage pertussis and reduce the risk of spreading it to others by:

- Following the schedule for giving antibiotics exactly as your doctor prescribed.
- Keeping your home free from irritants - as much as possible - that can trigger coughing, such as smoke, dust, and chemical fumes.
- Using a clean, cool mist vaporizer to help loosen secretions and soothe the cough.
- Practicing good handwashing.
- Drinking plenty of fluids, including water, juices, and soups, and eating fruits to prevent dehydration (lack of fluids). **Report any signs of dehydration to your doctor immediately.** These include dry, sticky mouth, sleepiness or tiredness, thirst, decreased urination or fewer wet diapers, few or no tears when crying, muscle weakness, headache, dizziness or lightheadedness.
- Eating small, frequent meals to help prevent vomiting if occurring.

VACCINES:

The best way to prevent pertussis (whooping cough) among infants, children, teens, and adults is to get vaccinated. Also, keep infants and other people at high risk for pertussis complications away from infected people.

In the United States, the recommended pertussis vaccine for infants and children is called DTaP. Today there is a booster for preteens, teens and adults that contains protection against tetanus, diphtheria and pertussis (Tdap).

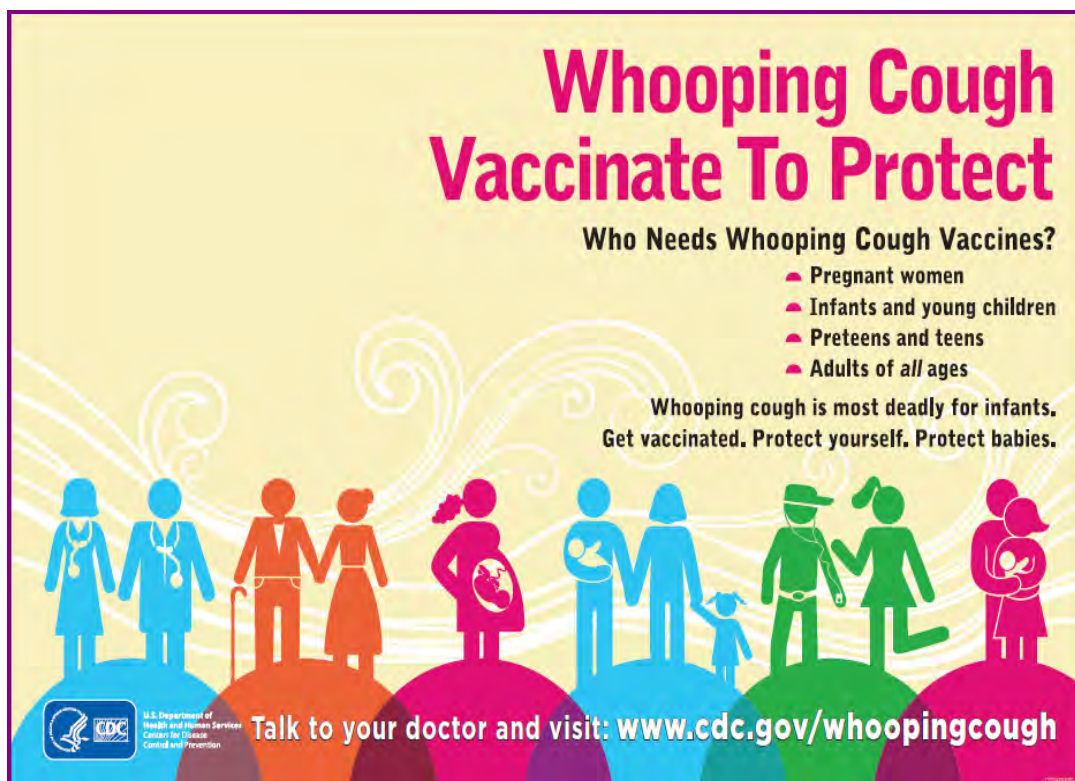
In March, 2015, six cases of Pertussis were reported in Broward. Four out these six cases were confirmed and two were probable. All of these cases were acquired in Florida and four of them were associated with an outbreak.

On 02/23/2015, Florida Department of Health in Broward County (DOH-Broward) was notified of a positive case of Pertussis from a parochial school. An epidemiological investigation was initiated with the coughing students identified and parents contacted. A list of non immunized students was prepared. Prophylaxis was provided to people living in the home of the diagnosed patient by their physician. A second case was confirmed at the school on 03/09/2015. Epidemiology department also monitored the school regarding any unusual absences.

On 03/06/2015, DOH-Broward was notified of a confirmed case of Pertussis at a local public school. Following that, DOH-Broward reviewed immunization records, absenteeism and health room visits for cough. Letters were sent to the homes of the students in three languages . Contact tracing for exposures to the affected child was conducted by Epidemiology.

On 03/09/2015, Florida Department of Health in Broward County (DOH-Broward) was notified of a positive case of Pertussis, attending a local daycare. Following the notification, epidemiology contacted the parents of the daycare students and the staff members. They were provided with the information about the signs and symptoms of Pertussis. Prophylaxis was offered to those who did not have a healthcare provider.

An additional case of Pertussis was assessed at a local hospital. The case lived in the same zip code as the index case and attended the same school.



Source: <http://www.cdc.gov/pertussis/materials/everyone.html>

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

	BROWARD COUNTY					FLORIDA				
	March			Cumulative (YTD)		March			Cumulative (YTD)	
	2015	2014	Meant†	2015	2014	2015	2014	Meant†	2015	2014
A. Enteric Infections										
Campylobacteriosis	15	10	11.4	36	45	265	233	159.8	773	664
Cryptosporidiosis	3	1	1.6	7	8	57	21	26	156	103
Giardiasis, Acute	2	10	8	13	28	90	80	98	250	226
Salmonellosis	16	28	23.2	63	88	257	239	250.8	811	855
Shigellosis	6	77	24.6	18	157	199	252	124.2	467	503
B. CNS Diseases & Bacteremias										
Haemophilus Influenzae Invasive Disease	1	2	1.2	9	8	14	31	22.8	48	93
Streptococcus Pneumoniae Invasive Disease:										
Drug Resistant	0	6	7.6	2	13	6	65	85.2	24	189
Drug Susceptible	5	6	9.4	19	20	49	63	75	128	208
C. Viral Hepatitis										
Hepatitis B Surface Antigen In Pregnant Women	2	17	7.4	5	41	56	59	45	115	133
Hepatitis B, Acute	3	0	1	8	2	44	28	21	105	82
Hepatitis C, Acute	2	0	0.4	2	0	18	19	13.8	38	41
D. Vector Borne, Zoonoses										
Lyme Disease	1	0	0.2	1	0	11	3	5.6	35	16
E. Others										
Creutzfeldt-Jacob Disease (CJD)	2	0	0.4	2	0	5	3	1.4	12	4
Legionellosis	3	0	0.4	7	7	22	21	13.8	71	56
Lead Poisoning	6	8	1.6	19	14	87	127	98.4	192	274
Pertussis	6	2	1.2	8	8	33	71	36.2	88	198
Varicella (Chickenpox)	3	0	4	7	3	92	50	96.8	224	144
Vibriosis (Other Vibrio Species)	1	0	0	1	0	1	0	0.6	2	1

* 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 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, March 2015

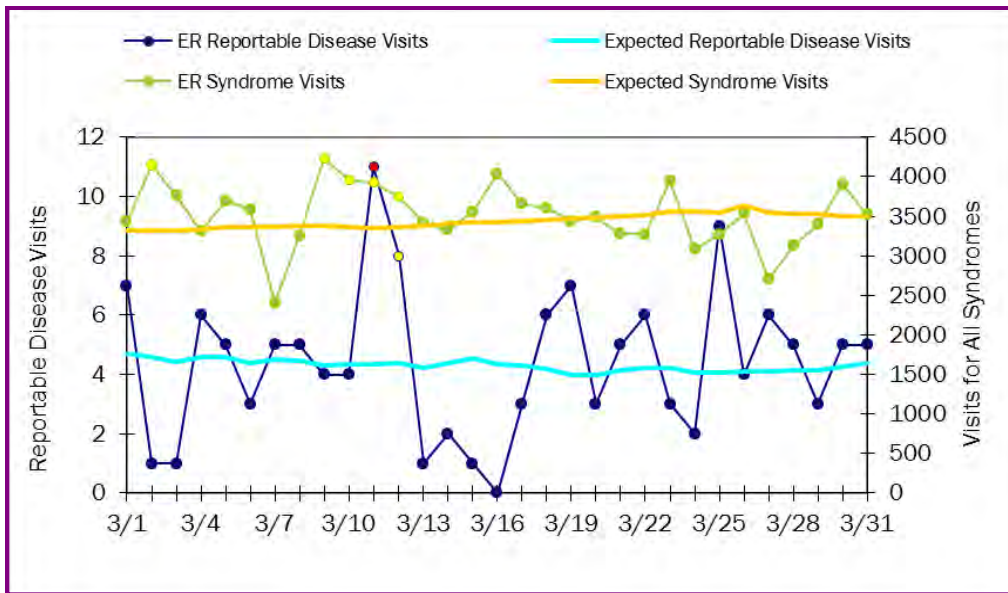


Figure 1. There is one warning and one alert for E.R reportable disease visits; and five warnings and zero alerts for E.R syndromic visits.
 Warning - Yellow data point
 Alert - Red data point

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

Disease	Alert Dates	Warning Dates	Syndrome	Alert Dates	Warning Dates
All Reportable Disease Query	11	12	Botulism-like Illness	9	2, 10, 11, 18
Vaccine Preventable Diseases ¹	26	27	Exposure	None	7, 12, 25
Hepatitis A and B	None	11	Fever	10, 11	1, 2, 3, 6, 12, 13, 15
Meningitis (may not be bacterial)	19	23	Gastrointestinal Illness	2, 3	4, 5, 9, 10, 11, 12
Varicella (chicken pox)	None	None	Hemorrhagic Illness	None	3, 4, 5, 23, 29
Vector Borne Diseases	None	None	Influenza-like Illness (ILI)	None	12
Dengue	None	None	Injury	2	3, 11, 15, 16, 23
Encephalitis	None	None	Neurological	9	3, 4, 6, 10
Malaria	None	None	Rash	9, 11	10, 30
Chikungunya	20	None	Respiratory	None	2
Gastrointestinal Illnesses	8	None	Shock/Coma	None	None
General Enterics ²	8	None	Other Illness	None	2, 3, 9, 11, 12, 16
Vomit and Diarrhea	2, 3	1, 4, 5, 9			

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 decreasing 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 adults 65 years and older. Broward flu activity is mild.

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

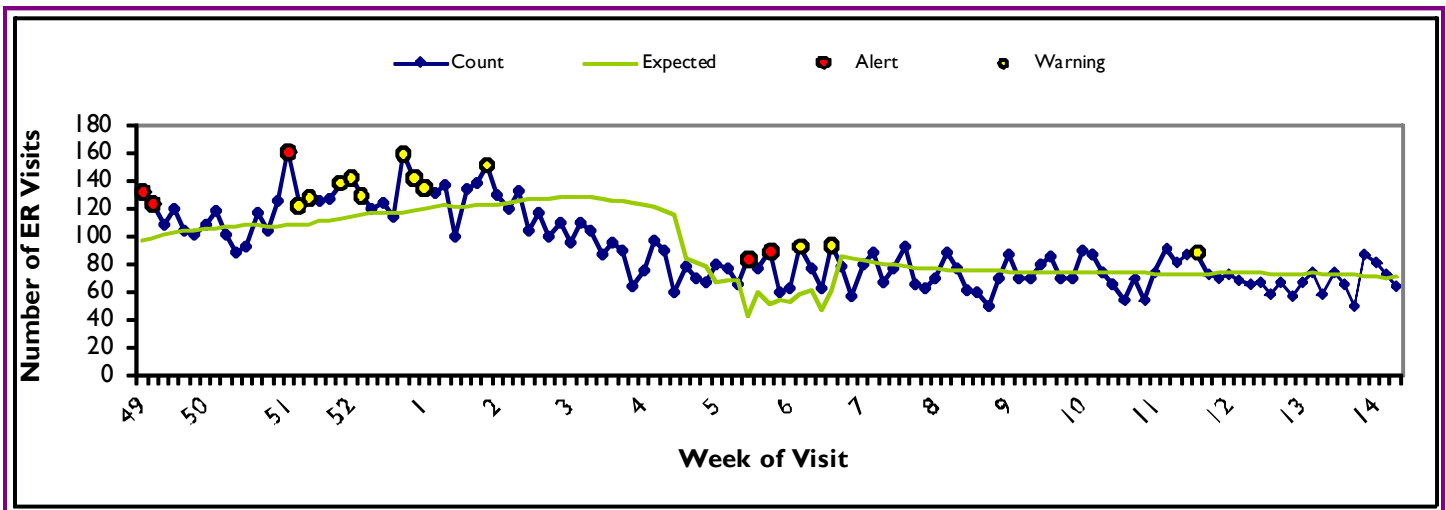
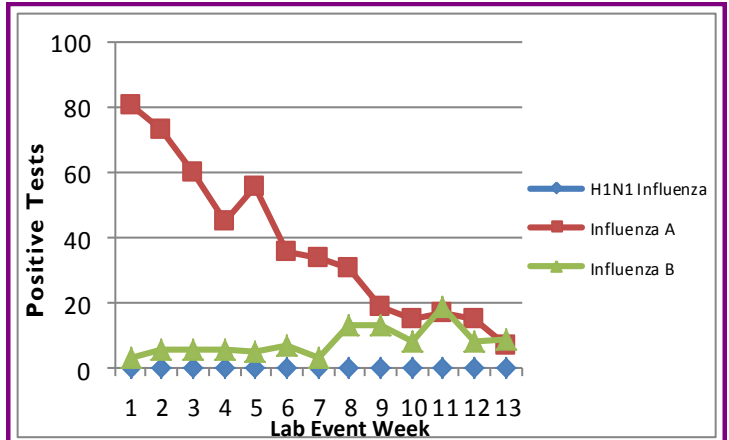
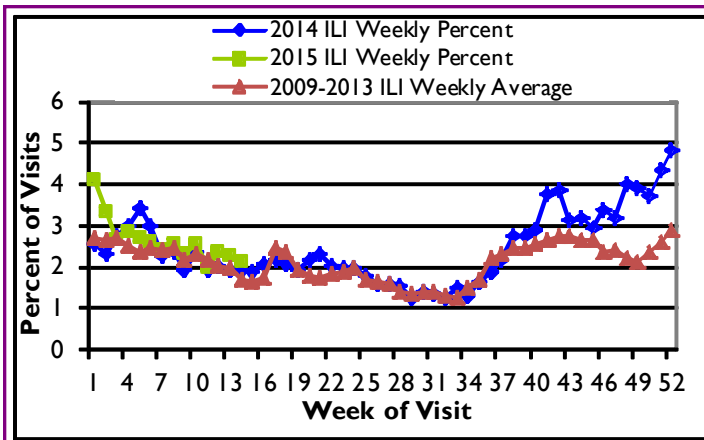


Figure 3. ESSENCE Reported ILI Visits, Broward, 2014-2015

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 March (week 10 to week 13) with one warning (Fig. 2). The percentage of emergency department visits due to ILI was slightly higher than weekly average for the last five years (Fig. 3). According to Merlin Flu Lab Reports, the number of positive tests for Influenza A was found in majority as compared to other types (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.

